

8.4 *Alignments* zu den einzelnen Proben

Anmerkungen und Legende zu den folgenden Abbildungen:

I= erste Extraktion

II= zweite Extraktion

1,2,3,...= PCR-Nummer

f= *forward*, mit oberem Primer sequenziert

r= *reverse*, mit unterem Primer sequenziert

K 1, 2, 3, ...= Klon und Klonnummer

*= mit UNG amplifiziert

NC_001567= Nummer des GenBank-Eintrags, der als Referenz verwendet wurde (überarbeitete Anderson-Sequenz, europäische Rinder-Konsensussequenz). Für alle *Alignments* wurde die Zählweise der Positionen der Referenzsequenz übernommen.

Beispiel einer Probenbezeichnung:

Eil 6 I 2 K7r = Probe 6 aus Eilsleben, erstes Extrakt, 2. PCR. Klon 7. revers sequenziert

In den *Alignments* werden grundsätzlich nur die Positionen angezeigt, die von der Referenzsequenz abweichen, Übereinstimmungen sind durch einen Punkt repräsentiert. Fehlende Basen sind durch einen Strich (-) dargestellt. Graue Kästchen zeigen Insertionen an. Bei nicht eindeutig identifizierbaren Basen wurden die IUB-Codes eingesetzt (vgl. Abschnitt 8.1, Tab. 27). In den *Alignments* sind an manchen Stellen Sequenzierfehler zu sehen, die absichtlich nicht korrigiert wurden. So kommt es in manchen Primersystemen vor, dass zu Beginn oder am Ende der Sequenz einzelne Basen vertauscht wurden (z.B. Abb. 60b Alb1). Ein weiteres Phänomen ist das der vermeintlichen Insertion, in den meisten Fällen handelt es sich hier um Doppelpeaks (z.B. durch Deaminierungen verursacht), die von der Software als zwei getrennte Signale gewertet wurden (z.B. Abb. 62a Alb3). Für das hintere Primersystem gibt es zwei verschiedene untere Primer (H5 mit L6 oder L7). Endet die Sequenz an der Position 16271, wurde die PCR mit H5L6 amplifiziert; endet sie jedoch an der Position 16312, ist die PCR mit H5L7 gelaufen.

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Alb1 I 1f
.					Alb1 I 2r
.					Alb1 II 1f
.					Alb1 II 2r
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
.					Alb1 I 1f
.					Alb1 I 2r
.					Alb1 II 1f
.					Alb1 II 2r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Alb1 I 1f
.					Alb1 I 2r
.					Alb1 II 1f
.					Alb1 II 2r

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					Alb1 I 1f
.					Alb1 I 2r
.					Alb1 II 1f
.					Alb1 II 2r
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					Alb1 I 1f
.					Alb1 I 2r
.					Alb1 II 1f
.					Alb1 II 2r
16150					
T T A C C A T T A G A T					NC_001567
.					Alb1 I 1f
.					Alb1 I 2r
.					Alb1 II 1f
.					Alb1 II 2r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Alb1 I 1f
.					Alb1 I 2r
.					Alb1 II 1f
16240	16250	16260	16270	16280	
G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Alb1 I 1f
.					Alb1 I 2r
.					Alb1 II 1f
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.					Alb1 I 1f
.					Alb1 I 2r
.					Alb1 II 1f

D) ZFX Y1

440	450	460	470	480	490	
TCCATACACGTGTCTG	ACATTGGACACGTTGAACACGTTGTTTCATGATAGCGTAGTAGA					NM_177490_ZFX
TG	TG			A	G	AF032867_bosZF
						AF032866_bosZFX
						Alb1 | 1 K1r
						Alb1 | 1 K2r
						Alb1 | 1 K3r
						Alb1 | 1 K4r
						Alb1 | 1 K5r
						Alb1 | 1 K6r
						Alb1 | 1 K7r
						Alb1 | 1 K8r
						Alb1 | 1 K9r
						Alb1 | 2 K1r
						Alb1 | 2 K2r
						Alb1 | 2 K3f
						Alb1 | 2 K4r
						Alb1 | 2 K5f
						Alb1 | 2 K6f
						Alb1 | 2 K7r
						Alb1 | 2 K8r
						Alb1 | 2 K9r

E) ZFX Y2

1000	1010	1020	1030		
GTAAGGAGAGGATGCTG	TGCCGCTGCAGCAGCCGCTGCCGCC				NM_177490_ZFX
A	C	T	A	A	AF032867_bosZF
	C	T	A	A	AF032866_bosZF
	C				Alb1 | 1 K1r
	C				Alb1 | 1 K2r
	C				Alb1 | 1 K3r
	C				Alb1 | 1 K4r
	C				Alb1 | 1 K5f
	C				Alb1 | 1 K6f
	C	T	T	T	Alb1 | 1 K7f
	C				Alb1 | 1 K8f
	C				Alb1 | 1 K9f
	C				Alb1 | 1 K10f

1040	1050	1060	1070	1080	
TGAAGCAGCAGATGGATGACAC	GAAATCAAAACCTTCATGCCGAT				NM_177490_ZFX
G	A	G	T	A	AF032867_bosZF
					AF032866_bosZF
					Alb1 | 1 K1r
					Alb1 | 1 K2r
					Alb1 | 1 K3r
					Alb1 | 1 K4r
					Alb1 | 1 K5f
					Alb1 | 1 K6f
					Alb1 | 1 K7f
					Alb1 | 1 K8f
					Alb1 | 1 K9f
					Alb1 | 1 K10f

Abb. 60: Alb 1

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.	Alb2 I 1f
.	Alb2 I 2r
.	Alb2 II 1f
.	Alb2 I 1 K1f
.	Alb2 I 1 K2f
.	Alb2 I 1 K3f
.	Alb2 I 1 K4f
.	Alb2 I 1 K5f
.	Alb2 I 1 K6f
.	Alb2 I 1 K7r
.	Alb2 I 1 K8r
.	Alb2 I 1 K9r
.	Alb2 I 1 K10r

15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A G A C A T A A T A T G T A T					NC_001567
G A					Alb2 I 1f
G A					Alb2 I 2r
G A					Alb2 II 1f
G A					Alb2 I 1 K1f
G A					Alb2 I 1 K2f
G A					Alb2 I 1 K3f
G . T A					Alb2 I 1 K4f
G A					Alb2 I 1 K5f
G A					Alb2 I 1 K6f
A A A					Alb2 I 1 K7r
G A					Alb2 I 1 K8r
G . T A					Alb2 I 1 K9r
A A A					Alb2 I 1 K10r

16010	16020	
A T A G T A C A T T A A A T T A T A T G C		NC_001567
.	.	Alb2 I 1f
.	.	Alb2 I 2r
.	.	Alb2 II 1f
.	.	Alb2 I 1 K1f
.	.	Alb2 I 1 K2f
.	.	Alb2 I 1 K3f
.	.	Alb2 I 1 K4f
.	.	Alb2 I 1 K5f
.	.	Alb2 I 1 K6f
.	.	Alb2 I 1 K7r
.	.	Alb2 I 1 K8r
.	.	Alb2 I 1 K9r
.	.	Alb2 I 1 K10r

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.	Alb2 I 1f
.	Alb2 I 2r
.	Alb2 II 1r

16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.	Alb2 I 1f
.	Alb2 I 2r
.	Alb2 II 1r

16150		
T T A C C A T T A G A T		NC_001567
.	.	Alb2 I 1f
.	.	Alb2 I 2r
.	.	Alb2 II 1r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.	.	.	.	.	Alb2 I 1f
.	.	.	.	.	Alb2 II 1f
.	.	.	.	.	Alb2 II 2r
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.	.	.	.	.	Alb2 I 1f
.	.	.	.	.	Alb2 II 1f
.	.	.	.	.	Alb2 II 2r
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.	.	.	.	.	Alb2 I 1f
.	.	.	.	.	Alb2 II 1f
.	.	.	.	.	Alb2 II 2r

Abb. 61: Alb 2

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Alb3 I 1f
.					Alb3 I 2r
.					Alb3 II 1f
A					
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T - G T A A T A A G A C A T A A T A T G T A					NC_001567
.					Alb3 I 1f
.					Alb3 I 2r
.					Alb3 II 1f
A A A					
16010	16020				
T A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Alb3 I 1f
.					Alb3 I 2r
.					Alb3 II 1f
A A					

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					Alb3 I 1f
.					Alb3 I 2r
.					Alb3 II 1r
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					Alb3 I 1f
.					Alb3 I 2r
.					Alb3 II 1r
Y					
16150					
T T A C C A T T A G A T					NC_001567
.					Alb3 I 1f
.					Alb3 I 2r
.					Alb3 II 1r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Alb3 I 1f
.					Alb3 I 2f
.					Alb3 II 1r
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Alb3 I 1f
.					Alb3 I 2f
.					Alb3 II 1r
R R					
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.					Alb3 I 1f
.					Alb3 I 2f
.					Alb3 II 1r
R					
					C .

Abb. 62: Alb 3

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
					Alb4 I 1f
					Alb4 I 2r
					Alb4 II 1f
			R		Alb4 II 2r
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
G A A					Alb4 I 1f
G A				G	Alb4 I 2r
G A				G	Alb4 II 1f
G A			R	G	Alb4 II 2r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
					Alb4 I 1f
					Alb4 I 2r
					Alb4 II 1f
					Alb4 II 2r

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
	T . C	T	C	C	Alb4 I 1f
	T . C	T	C	C	Alb4 I 2r
	T . C	T	C	C	Alb4 II 1r
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
		C	C		Alb4 I 1f
		C	C		Alb4 I 2r
		C	C		Alb4 II 1r
16150					
T T A C C A T T A G A T					NC_001567
					Alb4 I 1f
					Alb4 I 2r
					Alb4 II 1r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
				T	Alb4 I 1f
				T	Alb4 I 2r
				T	Alb4 II 1f
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
		C	A		Alb4 I 1f
		C	A	R R	Alb4 I 2r
		C	A		Alb4 II 1f
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
R		R		Y	Alb4 I 1f
					Alb4 I 2r
					Alb4 II 1f

Abb. 63: Alb 4

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.....	.....	.....	.....	.....	All1 1f*
.....	.....	.....	.....	.....	All1 2r
.....	.....	.....	.....	.....	All1 II 1r
.....	.....	.....	.....	.....	All1 II 2r*
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
G.....	.....	.....	.....	.....	All1 1f*
G.....	.....	.....	.....	G.....	All1 2r
G.....	.....	.....	.....	G.....	All1 II 1r
G.....	.....	.....	.....	G.....	All1 II 2r*
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.....	.....				All1 1f*
.....	.....				All1 2r
.....	.....				All1 II 1r
.....	.....				All1 II 2r*

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.....	.....	.....	.....	.....	All1 1f
.....	.....	.....	.....	.....	All1 II 1r
.....	.....	.....	.....	.....	All1 II 2f*
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.....	.....	.....	.....	.....	All1 1f
.....	.....	.....	.....	.....	All1 II 1r
.....	.....	.....	.....	.....	All1 II 2f*
16150					
T T A C C A T T A G A T					NC_001567
.....					All1 1f
.....					All1 II 1r
.....					All1 II 2f*

C) H5L6

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.....	.....	.....	.....	.....	All1 1f
.....	.....	.....	.....	.....	All1 12r*
.....	.....	.....	.....	.....	All1 13f
.....	.....	.....	.....	.....	All1 14f
.....	.....	.....	.....	.....	All1 15r
.....	.....	.....	.....	.....	All1 II 1f
.....	.....	.....	.....	.....	All1 II 2r
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.....	.....	.....	.....	.....	All1 1f
.....	.....	.....	.....	.....	All1 12r*
.....	.....	.....	.....	.....	All1 13f
.....	.....	.....	.....	.....	All1 14f
.....	.....	.....	.....	.....	All1 15r
.....	.....	.....	.....	.....	All1 II 1f
.....	.....	.....	.....	.....	All1 II 2r
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.....	.....	.....	.....	.....	All1 1f
.....	.....	.....	.....	.....	All1 12r*
.....	.....	.....	.....	.....	All1 13f
.....	.....	.....	.....	.....	All1 14f
.....	.....	.....	.....	.....	All1 15r
.....	.....	.....	.....	.....	All1 II 1f
.....	.....	.....	.....	.....	All1 II 2r

Abb. 64: All 1

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Ap6 I 1r
.					Ap6 II 1f
.					Ap6 II 2f
.					Ap6 II 3r
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
.					Ap6 I 1r
.					Ap6 II 1f
.					Ap6 II 2f
.					Ap6 II 3r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Ap6 I 1r
.					Ap6 II 1f
.					Ap6 II 2f
.					Ap6 II 3r

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					Ap6 I 1f
.					Ap6 I 2f
.					Ap6 I 3f*
.					Ap6 II 1r
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					Ap6 I 1f
.					Ap6 I 2f
.					Ap6 I 3f*
.					Ap6 II 1r
16150					
T T A C C A T T A G A T					NC_001567
.					Ap6 I 1f
.					Ap6 I 2f
.					Ap6 I 3f*
.					Ap6 II 1r

C) H5L6

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Ap6 I 1r
.					Ap6 I 2r
.					Ap6 I 3r
.					Ap6 I 4f
.					Ap6 I 5r
.					Ap6 I 6r
.					Ap6 I 7f
.					Ap6 II 1f
.					Ap6 II 2f
16240	16250	16260	16270		
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G					NC_001567
.					Ap6 I 1r
.					Ap6 I 2r
.					Ap6 I 3r
.					Ap6 I 4f
.					Ap6 I 5r
.					Ap6 I 6r
.					Ap6 I 7f
.					Ap6 II 1f
.					Ap6 II 2f

Abb. 65: Ap 6

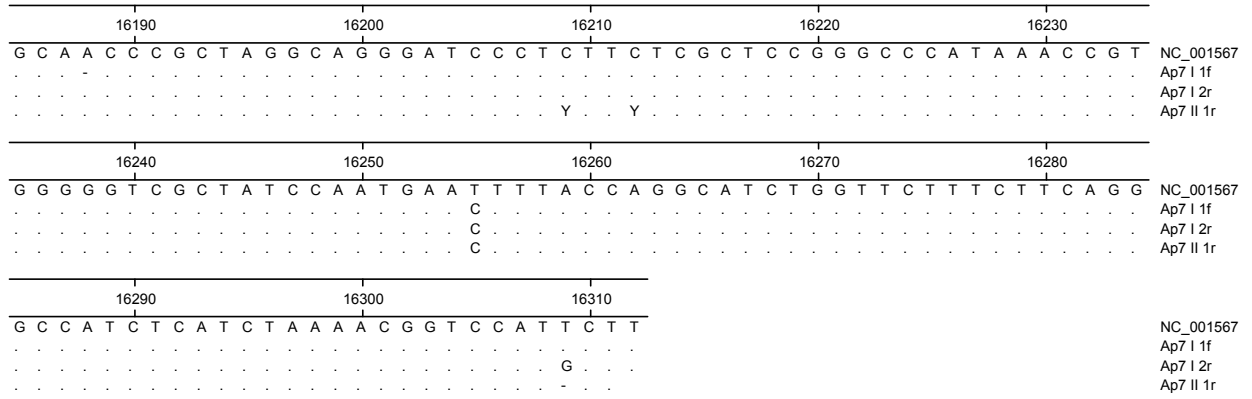


Abb. 66: Ap 7

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Ber6 I 1f
.					Ber6 I 2r
.					Ber6 II 1f
.					Ber6 II 2r
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
.					Ber6 I 1f
.					Ber6 I 2r
.					Ber6 II 1f
.					Ber6 II 2r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Ber6 I 1f
.					Ber6 I 2r
.					Ber6 II 1f
.					Ber6 II 2r

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					Ber6 I 1f
.					Ber6 I 2r
.					Ber6 II 1f
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					Ber6 I 1f
.					Ber6 I 2r
.					Ber6 II 1f
16150					
T T A C C A T T A G A T					NC_001567
.					Ber6 I 1f
.					Ber6 I 2r
.					Ber6 II 1f

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Ber6 I 1f
.					Ber6 I 2f
.					Ber6 I 3r
.					Ber6 II 1f
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Ber6 I 1f
.					Ber6 I 2f
.					Ber6 I 3r
.					Ber6 II 1f
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.					Ber6 I 1f
.					Ber6 I 2f
.					Ber6 I 3r
.					Ber6 II 1f

Abb. 67: Ber 6

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Bip1 I 1r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Bip1 II 1r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Bip1 II 2f
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
A A	A . . . . .	. . . . .	. . . . .	. . . . .	Bip1 I 1r
A A	A	W . . . . .	. . . . .	. . . . .	Bip1 II 1r
A A	A . . . . .	. . . . .	. . . . .	. . . . .	Bip1 II 2f
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
. . . . .	. . . . .				Bip1 I 1r
. . . . .	. . . . .				Bip1 II 1r
. . . . .	. . . . .				Bip1 II 2f

B) H3L4

16050	16060	16070	16080		
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T G A C T G T A C				NC_001567	
. . . . .	. . . . .	. . . . .	. . . . .	Bip1 I 1f	
. . . . .	. . . . .	. . . . .	. . . . .	Bip1 I 2r	
. . . . .	. . . . .	. . . . .	. . . . .	Bip1 II 1f	
16090	16100	16110	16120	16130	
A T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Bip1 I 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Bip1 I 2r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Bip1 II 1f
16140	16150				
C T T A C C A T T A G A T					NC_001567
. . . . .	. . . . .				Bip1 I 1f
. . . . .	. . . . .				Bip1 I 2r
. . . . .	. . . . .				Bip1 II 1f

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G - G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Bip1 I 1r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Bip1 II 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Bip1 I 2r
16240	16250	16260	16270	16280	
T G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Bip1 I 1r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Bip1 II 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Bip1 I 2r
16290	16300	16310			
G G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
. . . . .	. . . . .	. . . . .			Bip1 I 1r
. . . . .	. . . . .	. . . . .			Bip1 II 1f
. . . . .	. . . . .	. . . . .			Bip1 I 2r

Abb. 68: Bip 1

H5L6

16190										16200										16210										16220										16230									
G	C	A	A	C	C	G	C	T	A	G	G	C	A	G	-	G	G	A	T	C	C	C	T	C	T	T	C	T	C	G	C	T	C	C	G	G	C	C	C	A	T	A	A	A	C	C	G		
.	.	.	.	Y	A	A	.	.	Y	Y	T	G	.	T	T	.
.	A	A	.	.	C	.	T	G	.	T	T	.	
.	A	A	.	.	C	.	T	G	.	T	T	.	
.	A	A	.	.	C	.	T	G	.	T	T	.	
.	A	A	.	.	C	.	T	G	.	T	T	.	
16240										16250										16260										16270																			
T	G	G	G	G	T	C	G	C	T	A	T	C	C	A	A	T	G	A	A	T	T	T	T	A	C	C	A	G	G	C	A	T	C	T	G	G													
.	G	T	T	C	.	.	.	T	.	.	A
.	T	T	C	.	.	.	T	.	.	A
.	C	.	.	.	T	.	.	A	.	T	A	
.	T	T	C	.	.	.	T	.	.	A

NC_001567
 Bip2 I 1r
 Bip2 I 2r
 Bip2 I 3f
 Bip2 I 4r
 Bip2 II 1f

 NC_001567
 Bip2 I 1r
 Bip2 I 2r
 Bip2 I 3f
 Bip2 I 4r
 Bip2 II 1f

Abb. 69: Bip 2

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 I 1f
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 I 2f
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 II 1r
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 II 2r*
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
G . . . . .	.....	.....	.....	.....	G
G . . . . .	.....	.....	.....	.....	Cat1 I 1f
G . . . . .	.....	.....	.....	.....	G
G . . . . .	.....	.....	.....	.....	Cat1 I 2f
G . . . . .	.....	.....	.....	.....	G
G . . . . .	.....	.....	.....	.....	Cat1 II 1r
G . . . . .	.....	.....	.....	.....	G
G . . . . .	.....	.....	.....	.....	Cat1 II 2r*
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 I 1f
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 I 2f
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 II 1r
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 II 2r*

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 I 1f
.....	.....	.....	.....	.....	T
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 I 2r
.....	.....	.....	.....	.....	T
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 II 1f*
.....	.....	.....	.....	.....	T
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 II 2f*
.....	.....	.....	.....	.....	T
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 III 1f
.....	.....	.....	.....	.....	T
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 III 2r
.....	.....	.....	.....	.....	T
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 III 3f*
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 I 1f
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 I 2r
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 II 1f*
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 II 2f*
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 III 1f
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 III 2r
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 III 3f*
16150					
T T A C C A T T A G A T					NC_001567
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 I 1f
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 I 2r
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 II 1f*
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 II 2f*
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 III 1f
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 III 2r
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 III 3f*

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.....	.....	.....	.....	.....	T
.....	.....	.....	.....	.....	Cat1 I 1f*
.....	.....	.....	.....	.....	T
.....	.....	.....	.....	.....	Cat1 I 2r*
.....	.....	.....	.....	.....	T
.....	.....	.....	.....	.....	Cat1 II 1f
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 I 1f*
.....	.....	.....	.....	.....	A
.....	.....	.....	.....	.....	Cat1 I 2r*
.....	.....	.....	.....	.....	A
.....	.....	.....	.....	.....	Cat1 II 1f
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.....	.....	.....	.....	.....	A
.....	.....	.....	.....	.....	Cat1 I 1f*
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 I 2r*
.....	.....	.....	.....	.....	C
.....	.....	.....	.....	.....	Cat1 II 1f

D) ZFX1

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Der1 I 1f
.					Der1 I 2r
.					Der1 II 1f
.					Der1 II 2r*
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
.					Der1 I 1f
.					Der1 I 2r
.					Der1 II 1f
.					Der1 II 2r*
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Der1 I 1f
.					Der1 I 2r
.					Der1 II 1f
.					Der1 II 2r*

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					Der1 I 1r
.					Der1 I 2r
.					Der1 II 1f*
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					Der1 I 1r
.					Der1 I 2r
.					Der1 II 1f*
16150					
T T A C C A T T A G A T					NC_001567
.					Der1 I 1r
.					Der1 I 2r
.					Der1 II 1f*

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Der1 I 1f
.					Der1 I 2r
.					Der1 II 1f*
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Der1 I 1f
.					Der1 I 2r
.					Der1 II 1f*
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.					Der1 I 1f
.					Der1 I 2r
.					Der1 II 1f*

Abb. 73: Der 1

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Did3 I 1r
.					Did I 2f
.					Did3 II 1f
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
G					Did3 I 1r
G					Did I 2f
G A					Did3 II 1f
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Did3 I 1r
.					Did I 2f
.					Did3 II 1f

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					Did3 I 1f
.					Did3 I 2r
.					Did3 II 1f
.					Did3 II 2r
.					Y
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					Did3 I 1f
.					Did3 I 2r
.					Did3 II 1f
.					Did3 II 2r
16150					
T T A C C A T T A G A T					NC_001567
.					Did3 I 1f
.					Did3 I 2r
.					Did3 II 1f
.					Did3 II 2r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Did3 I 1f
.					Did3 I 2r
.					Did3 II 1f
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Did3 I 1f
.					Did3 I 2r
.					Did3 II 1f
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.					Did3 I 1f
.					Did3 I 2r
.					Did3 II 1f

Abb. 74: Did 3

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Ei1 I 1f
.					Ei1 I 2r
.					Ei1 II 1f
.					Ei1 II 2r
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
.					Ei1 I 1f
.					Ei1 I 2r
.					Ei1 II 1f
.					Ei1 II 2r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Ei1 I 1f
.					Ei1 I 2r
.					Ei1 II 1f
.					Ei1 II 2r

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					Ei1 I 1f
.					Ei1 I 2r
.					Ei1 II 1f
.					Ei1 II 2r
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					Ei1 I 1f
.					Ei1 I 2r
.					Ei1 II 1f
.					Ei1 II 2r
16150					
T T A C C A T T A G A T					NC_001567
.					Ei1 I 1f
.					Ei1 I 2r
.					Ei1 II 1f
.					Ei1 II 2r
T A					

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Ei1 I 1f
.					Ei1 I 2r
.					Ei1 II 1f
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Ei1 I 1f
.					Ei1 I 2r
.					Ei1 II 1f
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.					Ei1 I 1f
.					Ei1 I 2r
.					Ei1 II 1f

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C -	C A T A C A C A G A C C A C A G A A T G A A T T A C C T				NC_001567
. A . . . . .	. . . . . Y . . . . .		. . . . . A . . . . .	. . . . . C	Ei15 I 1f
. . . . . . . . . . .	. . . . . . . . . . .		. . . . . . . . . . .	. . . . . C	Ei15 I 2r
. . . . . . . . . . .	. . . . . . . . . . .		. . . . . W . . . . .	. . . . . C	Ei15 II 1f
. . . . . . . . . . .	. . . . . . . . . . .		. . . . . . . . . . .	. . . . . C	Ei15 II 2f
15960	15970	15980	15990	16000	
A C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A G A C A T A A T A T G T A					NC_001567
. G A . . . . .			. G . . . . .	. G	Ei15 I 1f
. G . . . . .			. G . . . . .	. G	Ei15 I 2r
. G . . . . .			. G . . . . .	. G	Ei15 II 1f
. G . . . . .			. G . . . . .	. G	Ei15 II 2f
16010	16020				
T A T A G T A C A T T A A A T T A T A T G C					NC_001567
. C					Ei15 I 1f
. C					Ei15 I 2r
. C					Ei15 II 1f
. T					Ei15 II 2f

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
. T . C T . . . . .	. . . . . C . . . . .	. . . . . C . . . . .	. . . . . C . . . . .	. . . . . C	Ei15 I 1f
. T . C T . . . . .	. . . . . C . . . . .	. . . . . C . . . . .	. . . . . C . . . . .	. . . . . C	Ei15 I 2f
. T . C T . . . . .	. . . . . C . . . . .	. . . . . C . . . . .	. . . . . C . . . . .	. . . . . C	Ei15 II 1f
. T . C T . . . . .	. . . . . C . . . . .	. . . . . C . . . . .	. . . . . C . . . . .	. . . . . C	Ei15 II 2r
16100	16110	16120	16130		
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T - A T T C					NC_001567
. C . . . . .	. . . . . C . . . . .	. . . . . C . . . . .	. . . . . C . . . . .	. . . . . C	Ei15 I 1f
. C . . . . .	. . . . . C . . . . .	. . . . . C . . . . .	. . . . . C . . . . .	. . . . . C	Ei15 I 2f
. C . . . . .	. . . . . C . . . . .	. . . . . C . . . . .	. . . . . C . . . . .	. . . . . C	Ei15 II 1f
. C . . . . .	. . . . . C . . . . .	. . . . . C . . . . .	. . . . . C . . . . .	. . . . . C	Ei15 II 2r
16140	16150				
C T T A C C A T T A G A T					NC_001567
. C					Ei15 I 1f
. C					Ei15 I 2f
. C					Ei15 II 1f
. C T A					Ei15 II 2r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
. T . . . . .	. . . . . T . . . . .	. . . . . T . . . . .	. . . . . T . . . . .	. . . . . T	Ei15 I 1f
. . . . . . . . . . .	. . . . . . . . . . .	. . . . . . . . . . .	. . . . . . . . . . .	. . . . . . . . . . .	Ei15 I 2f
. . . . . . . . . . .	. . . . . . . . . . .	. . . . . . . . . . .	. . . . . T . . . . .	. . . . . T	Ei15 I 3f
. . . . . . . . . . .	. . . . . . . . . . .	. . . . . . . . . . .	. . . . . . . . . . .	. . . . . T	Ei15 II 1f
. . . . . . . . . . .	. . . . . R . . . . .	. . . . . R . . . . .	. . . . . . . . . . .	. . . . . T	Ei15 II 2r
. . . . . . . . . . .	. . . . . . . . . . .	. . . . . . . . . . .	. . . . . . . . . . .	. . . . . T	Ei15 II 3f
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
. A . . . . .	. . . . . C . . . . .	. . . . . A . . . . .	. . . . . A . . . . .	. . . . . A	Ei15 I 1f
. . . . . . . . . . .	. . . . . C . . . . .	. . . . . A . . . . .	. . . . . A . . . . .	. . . . . A	Ei15 I 2f
. . . . . . . . . . .	. . . . . C . . . . .	. . . . . A . . . . .	. . . . . A . . . . .	. . . . . A	Ei15 I 3f
. R . . . . .	. . . . . C . . . . .	. . . . . A . . . . .	. . . . . A . . . . .	. . . . . A	Ei15 II 1f
. . . . . . . . . . .	. . . . . C . . . . .	. . . . . A . . . . .	. . . . . A . . . . .	. . . . . A	Ei15 II 2r
. . . . . . . . . . .	. . . . . C . . . . .	. . . . . A . . . . .	. . . . . A . . . . .	. . . . . A	Ei15 II 3f
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
. T . . . . .	. . . . . T . . . . .	. . . . . T . . . . .	. . . . . T . . . . .	. . . . . T	Ei15 I 1f
. . . . . . . . . . .	. . . . . T . . . . .	. . . . . T . . . . .	. . . . . T . . . . .	. . . . . T	Ei15 I 2f
. . . . . . . . . . .	. . . . . T . . . . .	. . . . . T . . . . .	. . . . . T . . . . .	. . . . . T	Ei15 I 3f
. . . . . . . . . . .	. . . . . T . . . . .	. . . . . T . . . . .	. . . . . T . . . . .	. . . . . T	Ei15 II 1f
. . . . . . . . . . .	. . . . . T . . . . .	. . . . . T . . . . .	. . . . . T . . . . .	. . . . . T	Ei15 II 2r
. . . . . . . . . . .	. . . . . T . . . . .	. . . . . T . . . . .	. . . . . T . . . . .	. . . . . T	Ei15 II 3f

Abb. 78: Eil 5

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
					Eii6 I 1f
					Eii6 I 2r
					Eii6 II 1f
					Eii6 II 2r
					Eii6 II 3r
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
G					Eii6 I 1f
G					Eii6 I 2r
G					Eii6 II 1f
G					Eii6 II 2r
G					Eii6 II 3r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
					Eii6 I 1f
					Eii6 I 2r
					Eii6 II 1f
					Eii6 II 2r
					Eii6 II 3r

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
					Eii6 I 1f
					Eii6 I 2r
					Eii6 I 3f
					Eii6 II 1f
					Eii6 II 2r
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
					Eii6 I 1f
					Eii6 I 2r
					Eii6 I 3f
					Eii6 II 1f
					Eii6 II 2r
16150					
T T A C C A T T A G A T					NC_001567
C					Eii6 I 1f
C					Eii6 I 2r
C					Eii6 I 3f
C					Eii6 II 1f
C					Eii6 II 2r

C) H5L6 / H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.	Eil6 I 1r
.	.	.	.	T	Eil6 I 2f
.	.	.	.	T	Eil6 I 3r
.	.	.	.	T	Eil6 I 4f
.	.	.	.	T	Eil6 I 5f
.	.	.	.	T	Eil6 II 1f
.	.	.	.	T	Eil6 II 2r
.	.	.	.	T	Eil6 II 3f
.	.	.	.	T	Eil6 II 4r

16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.	Eil6 I 1r
.	.	.	.	A T A	Eil6 I 2f
.	.	.	.	A	Eil6 I 3r
.	.	.	.	A	Eil6 I 4f
.	.	.	.	A	Eil6 I 5f
.	.	.	.	A	Eil6 II 1f
.	.	.	.	A W	Eil6 II 2r
.	.	.	.	A	Eil6 II 3f
.	.	.	.	A	Eil6 II 4r

16290	16300	16310	
G C C A T C T C A T C T A A A A C G G T C C A T T C T T			NC_001567
.	.	.	Eil6 I 1r
.	.	.	Eil6 I 2f
.	.	.	Eil6 I 3r
.	.	.	Eil6 I 4f
.	.	.	Eil6 I 5f
.	.	.	Eil6 II 1f
.	.	.	Eil6 II 2r
.	.	.	Eil6 II 3f
.	.	.	Eil6 II 4r

Abb. 79: Eil 6

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
					Eil7 1 1f
	R				Eil7 1 2r
					Eil7 1 1f*
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
					Eil7 1 1f
					Eil7 1 2r
					Eil7 1 1f*
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
					Eil7 1 1f
					Eil7 1 2r
					Eil7 1 1f*

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
					Eil7 1 1f
					Eil7 1 2r
					Eil7 1 3f
					Eil7 1 4r*
					Eil7 1 5f*
					Eil7 1 1f*
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
					Eil7 1 1f
					Eil7 1 2r
					Eil7 1 3f
					Eil7 1 4r*
					Eil7 1 5f*
					Eil7 1 1f*
16150					
T T A C C A T T A G A T					NC_001567
					Eil7 1 1f
					Eil7 1 2r
					Eil7 1 3f
					Eil7 1 4r*
					Eil7 1 5f*
					Eil7 1 1f*

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
					Eil7 1 1f
					Eil7 1 2f
					Eil7 1 3r
					Eil7 1 4f*
					Eil7 1 1r
					Eil7 1 2f
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
					Eil7 1 1f
					Eil7 1 2f
					Eil7 1 3r
					Eil7 1 4f*
					Eil7 1 1r
					Eil7 1 2f
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
					Eil7 1 1f
					Eil7 1 2f
					Eil7 1 3r
					Eil7 1 4f*
					Eil7 1 1r
					Eil7 1 2f

Abb. 80: Eil 7

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C C A C A G A A T G A A T T A C C T A					NC_001567
.					Ei9 I 1f
.					Ei9 I 2r
.					Ei9 II 1f
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
.					Ei9 I 1f
.					Ei9 I 2r
.					Ei9 II 1f
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Ei9 I 1f
.					Ei9 I 2r
.					Ei9 II 1f

B) H3L4

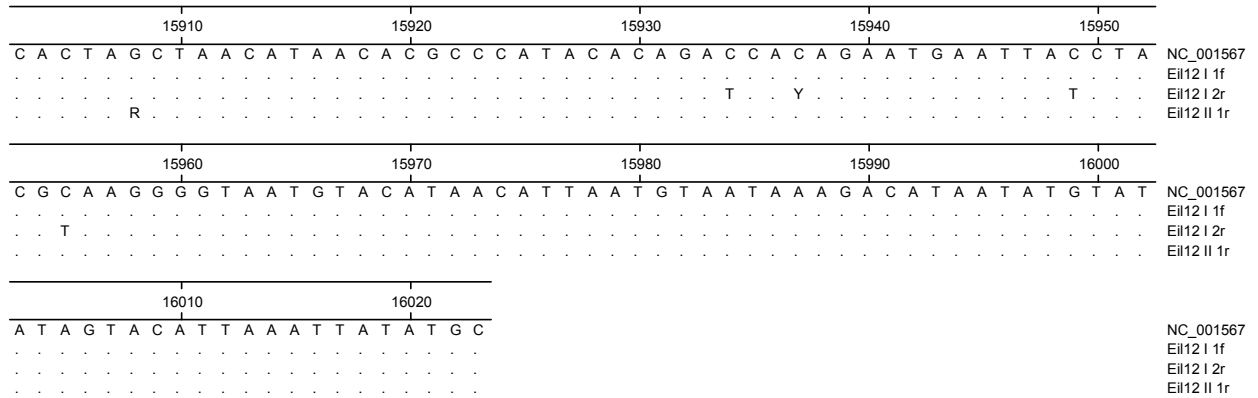
16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					Ei9 I 1f
.					Ei9 I 2r
.					Ei9 II 1f *
.					Ei9 II 2r
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					Ei9 I 1f
.					Ei9 I 2r
.					Ei9 II 1f *
.					Ei9 II 2r
16150					
T T A C C A T T A G A T					NC_001567
.					Ei9 I 1f
.					Ei9 I 2r
.					Ei9 II 1f *
. T A					Ei9 II 2r

C) H5L7

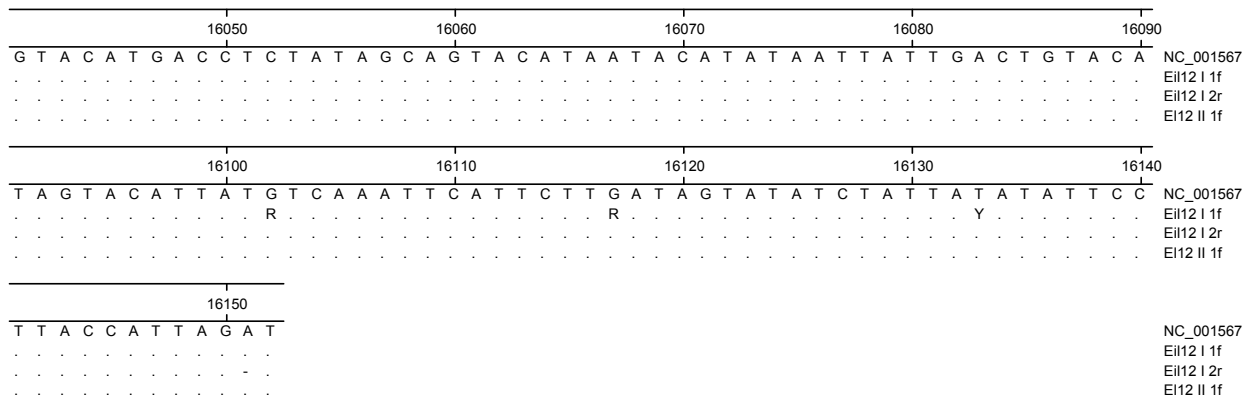
16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Ei9 I 1f
.					Ei9 I 2r
.					Ei9 II 1f *
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Ei9 I 1f
.					Ei9 I 2r
.					Ei9 II 1f *
16290	16300	16310			
G C C A T C T C A T C T A A A C G G T C C A T T C T T					NC_001567
.					Ei9 I 1f
. A .					Ei9 I 2r
.					Ei9 II 1f *

Abb. 81: Eil 9

A) H1L2



B) H3L4



C) H5L7

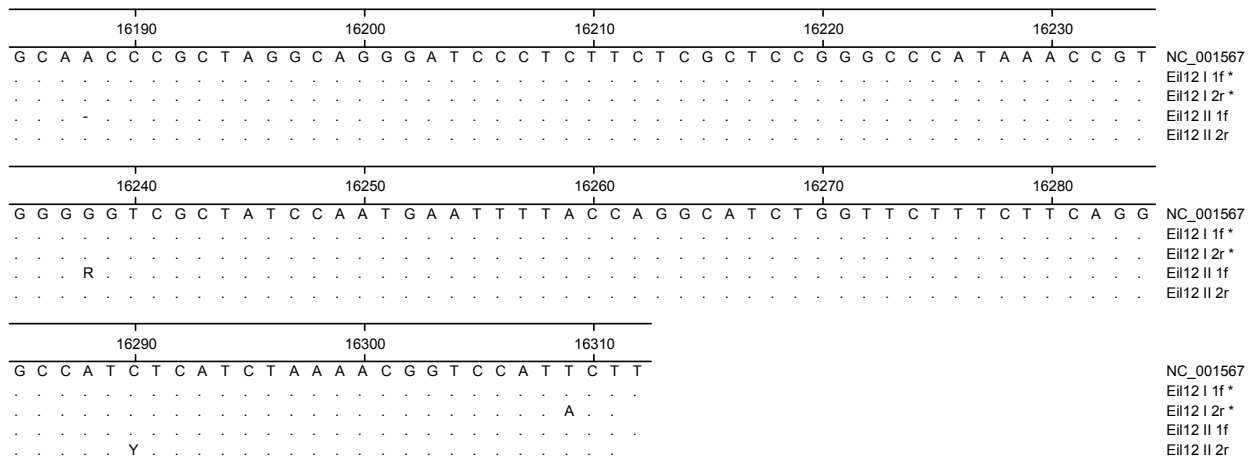


Abb. 82: Eil 12

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.....	.....	.....	.....	.....	Emm I 1f
.....	.....	.....	.....	.....	Emm I 2r
.....	.....	.....	.....	.....	Emm II 1r
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
.....	.....	.....	.....	.....	Emm I 1f
.....	.....	.....	.....	.....	Emm I 2r
.....	.....	.....	.....	.....	Emm II 1r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.....	.....				Emm I 1f
.....	.....				Emm I 2r
.....	.....				Emm II 1r

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.....	.....	.....	.....	.....	Emm I 1f
.....	.....	.....	.....	.....	Emm I 2r
.....	.....	.....	.....	.....	Emm II 1f
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.....	.....	.....	.....	.....	Emm I 1f
.....	.....	.....	.....	.....	Emm I 2r
.....	.....	.....	.....	.....	Emm II 1f
16150					
T T A C C A T T A G A T					NC_001567
.....	.....	.....	.....	.....	Emm I 1f
.....	.....	.....	.....	.....	Emm I 2r
.....	.....	.....	.....	.....	Emm II 1f

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.....	.....	.....	.....	.....	Emm I 1f
.....	.....	.....	.....	.....	Emm I 2r
.....	.....	.....	.....	.....	Emm II 1r
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.....	.....	.....	.....	.....	Emm I 1f
.....	.....	.....	.....	.....	Emm I 2r
.....	.....	.....	.....	.....	Emm II 1r
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.....	.....	.....	.....	.....	Emm I 1f
.....	.....	.....	.....	.....	Emm I 2r
.....	.....	.....	.....	.....	Emm II 1r

Abb. 85: Emm

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
					Eti I 1r
					Eti I 1f
					Eti I 2r
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
G					Eti I 1r
G					Eti I 1f
G					Eti I 2r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
					Eti I 1r
					Eti I 1f
					Eti I 2r

B) H3L4

16050	16060	16070	16080		
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T - G A C T G T A C				NC_001567	
				Eti I 1f	
				Eti I 2r	
				Eti I 3f	
				Eti I 4r	
				Eti I 5r	
				Eti II 1f	
				Eti II 2f	
				Eti II 3r	
16090	16100	16110	16120	16130	
A T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C					NC_001567
					Eti I 1f
					Eti I 2r
					Eti I 3f
					Eti I 4r
					Eti I 5r
					Eti II 1f
					Eti II 2f
					Eti II 3r
16140	16150				
C T T A C C A T T A G A T					NC_001567
					Eti I 1f
					Eti I 2r
					Eti I 3f
					Eti I 4r
					Eti I 5r
					Eti II 1f
					Eti II 2f
					Eti II 3r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
					Eti I 1f
					Eti I 1f
					Eti I 2r
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
					Eti I 1f
					Eti I 1f
					Eti I 2r
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
					Eti I 1f
					Eti I 1f
					Eti I 2r

A) H1L2

15910	15920	15930	15940	15950																																												
C	A	C	T	A	G	C	T	A	A	C	A	T	A	A	C	A	C	G	C	C	C	A	T	A	C	A	C	A	G	A	C	C	A	C	A	G	A	A	T	G	A	A	T	T	A	C	T	A
NC_001567																																																
God1 I 1f																																																
God1 I 2r																																																
God1 II 1f																																																
15960	15970	15980	15990	16000																																												
C	G	C	A	A	G	G	G	T	A	A	T	G	T	A	C	A	T	A	A	C	A	T	T	A	A	T	G	T	A	A	T	A	A	G	A	C	A	T	A	A	T	A	T	G	T	A	T	
NC_001567																																																
God1 I 1f																																																
God1 I 2r																																																
God1 II 1f																																																
16010	16020																																															
A	T	A	G	T	A	C	A	T	T	A	A	A	T	T	A	T	A	T	G	C																												
NC_001567																																																
God1 I 1f																																																
God1 I 2r																																																
God1 II 1f																																																

B) H3L4

16050	16060	16070	16080	16090																																													
G	T	A	C	A	T	G	A	C	C	T	C	T	A	T	A	G	C	A	G	T	A	C	A	T	A	A	T	A	C	A	T	A	T	A	T	T	A	T	T	G	A	C	T	G	T	A	C	A	
NC_001567																																																	
God1 I 1r																																																	
God1 I 2r																																																	
God1 II 1f																																																	
16100	16110	16120	16130	16140																																													
T	A	G	T	A	C	A	T	T	A	T	G	T	C	A	A	A	T	T	C	A	T	T	C	T	T	G	A	T	A	G	T	A	T	A	T	C	T	A	T	T	A	T	A	T	A	T	T	C	C
NC_001567																																																	
God1 I 1r																																																	
God1 I 2r																																																	
God1 II 1f																																																	
16150																																																	
T	T	A	C	C	A	T	T	A	G	A	T																																						
NC_001567																																																	
God1 I 1r																																																	
God1 I 2r																																																	
God1 II 1f																																																	

C) H5L7

16190	16200	16210	16220	16230																																												
G	C	A	A	C	C	G	C	T	A	G	G	C	A	G	G	A	T	C	C	C	T	C	T	T	C	T	C	G	C	T	C	C	G	G	G	C	C	C	A	T	A	A	A	C	C	G	T	
NC_001567																																																
God1 I 1f																																																
God1 I 2r																																																
God1 II 1f																																																
God1 II 2r																																																
16240	16250	16260	16270	16280																																												
G	G	G	G	G	T	C	G	C	T	A	T	C	C	A	A	T	G	A	A	T	T	T	A	C	C	A	G	G	C	A	T	C	T	G	G	T	T	C	T	T	T	C	T	T	C	A	G	G
NC_001567																																																
God1 I 1f																																																
God1 I 2r																																																
God1 II 1f																																																
God1 II 2r																																																
16290	16300	16310																																														
G	C	C	A	T	C	T	C	A	T	C	T	A	A	A	A	C	G	G	T	C	C	A	T	T	C	T																						
NC_001567																																																
God1 I 1f																																																
God1 I 2r																																																
God1 II 1f																																																
God1 II 2r																																																

Abb. 87: God 1

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
. A					God2 I 1f
.					God2 I 2r
.					God2 II 1f
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
K A					God2 I 1f
G					God2 I 2r
G					God2 II 1f
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					God2 I 1f
.					God2 I 2r
.					God2 II 1f

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					God2 I 1r
.					God2 I 2r
.					God2 II 1f
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					God2 I 1r
.					God2 I 2r
.					God2 II 1f
16150					
T T A C C A T T A G A T					NC_001567
.					God2 I 1r
.					God2 I 2r
.					God2 II 1f

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
. T T					God2 I 1f
.					God2 I 2r
.					God2 II 1f
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
. C					God2 I 1f
. C					God2 I 2r
. C					God2 II 1f
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
. N					God2 I 1f
.					God2 I 2r
.					God2 II 1f

Abb. 88: God 2

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					God3 I 1f
.					God3 I 2r
.					God3 II 1f
.					God3 II 2r
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
A .					God3 I 1f
.					God3 I 2r
.					God3 II 1f
.					God3 II 2r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					God3 I 1f
.					God3 I 2r
.					God3 II 1f
.					God3 II 2r

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					God3 I 1f
R .					God3 I 2r
.					God3 II 1f
.					God3 II 2r
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					God3 I 1f
.					God3 I 2r
R .					God3 II 1f
.					God3 II 2r
16150					
T T A C C A T T A G A T					NC_001567
.					God3 I 1f
.					God3 I 2r
T .					God3 II 1f
.					God3 II 2r
T A					

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					God3 I 1f
.					God3 I 2f
.					God3 I 3r
.					God3 II 1f
.					God3 II 2r
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					God3 I 1f
.					God3 I 2f
R .					God3 I 3r
.					God3 II 1f
.					God3 II 2r
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.					God3 I 1f
.					God3 I 2f
.					God3 I 3r
.					God3 II 1f
.					God3 II 2r

Abb. 89: God 3

A) H1L2

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Lju1 I 1f
.					Lju1 I 2r
.					Lju1 II 1f
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
.					Lju1 I 1f
.					Lju1 I 2r
.					Lju1 II 1f
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Lju1 I 1f
.					Lju1 I 2r
.					Lju1 II 1f

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					Lju1 I 1f
.					Lju1 I 2r
.					Lju1 II 1f
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					Lju1 I 1f
.					Lju1 I 2r
.					Lju1 II 1f
16150					
T T A C C A T T A G A T					NC_001567
.					Lju1 I 1f
.					Lju1 I 2r
.					Lju1 II 1f

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Lju1 I 1f
.					Lju1 I 2r
.					Lju1 II 1f
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Lju1 I 1f
.					Lju1 I 2r
.					Lju1 II 1f
16290	16300	16310			
G C C A T C T C A T C T A A A C G G T C C A T T C T T					NC_001567
.					Lju1 I 1f
.					Lju1 I 2r
.					Lju1 II 1f

D) ZFX1

440	450	460	470	480	490	
T C C A T A C A C G T G T C T G A C A T T G G A C A C G T T G A A C A C G T T G T T C A T G A T A G C G T A G T A G A						NM_177490_ZFX
. T G T G T A C G T						AF032866_bosZFX1
.						Lju1 I 1 K7T
.						Lju1 I 1 K9r
.						Lju1 I 1 K10r
.						Lju1 I 1 K11r
.						Lju1 I 1 K12r
.						Lju1 I 1 K13f
.						Lju1 I 1 K14f
.						Lju1 I 1 K2r
.						Lju1 I 1 K3r
.						Lju1 I 1 K4f
.						Lju1 I 1 K5r
.						Lju1 I 1 K6f
.						Lju1 I 1 K7f
.						Lju1 I 1 K8f

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C C - A T A C A C A G A C C A C A G A A T G A A T T A C C T					NC_001567
. C G C . T . A C T . T C . C G C . G C					Lju2 I 1f
. C G C . T . A C T . T C . C G C . G C					Lju2 I 2r
. C G C . T . A C T . T C . C G C . G C					Lju2 II 1f
15960	15970	15980	15990	16000	
A C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A					NC_001567
. A A T T					Lju2 I 1f
. A A T T					Lju2 I 2r
. A A T T					Lju2 II 1f
16010	16020				
T A T A G T A C A T T T A A A T T A T A T G C					NC_001567
. .					Lju2 I 1f
. .					Lju2 I 2r
. .					Lju2 II 1f

B) H3L4

16050	16060	16070	16080		
G T A C A T G A C C T C T A T - A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C				NC_001567	
. T G A . C . T . A T G C A . T				Lju2 I 1f	
. T G A . C . T . A T Y G C A . T				Lju2 I 2r	
. T G A . C . T . A T G C A . T				Lju2 II 1f	
16090	16100	16110	16120	16130	
A T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T T C					NC_001567
. A C . T G . C T G A C G C C T					Lju2 I 1f
. A C . T G . C T G A C G C C T					Lju2 I 2r
. A C . T G . C T G A C G C C T					Lju2 II 1f
16140	16150				
C T T A C C A T T A G A T					NC_001567
. .					Lju2 I 1f
. .					Lju2 I 2r
. .					Lju2 II 1f

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G - G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G					NC_001567
. A A C . T .					Lju2 I 1f
. A A . R . C . T .					Lju2 I 2r
. A A C . T .					Lju2 II 1f
16240	16250	16260	16270	16280	
T G G G G G T C G C T A T C C A A T G A A T T T T A C C A G G C A T C T G G T T C T T T C T T C A G					NC_001567
. T T C T A .					Lju2 I 1f
. T T C T A .					Lju2 I 2r
. T T C T A .					Lju2 II 1f
16290	16300	16310			
G G C C A T C T C A T C T A A A C G G T C C A T T C T T					NC_001567
. .					Lju2 I 1f
. .					Lju2 I 2r
. .					Lju2 II 1f

Abb. 94: Lju 2

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.....	.....	.....	.....	.....	Lju3 I 1f
.....	.....	.....	.....	.....	Lju3 I 2r
.....	.....	.....	.....	.....	Lju3 II 1f
.....	.....	.....	.....	.....	Lju3 II 2r*
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
A . . . . .	.....	.....	.....	.....	Lju3 I 1f
A . . . . .	.....	.....	.....	.....	Lju3 I 2r
A . . . . .	.....	.....	.....	.....	Lju3 II 1f
A . . . . .	.....	.....	.....	.....	Lju3 II 2r*
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.....	.....	.....	.....	.....	Lju3 I 1f
.....	.....	.....	.....	.....	Lju3 I 2r
.....	.....	.....	.....	.....	Lju3 II 1f
.....	.....	.....	.....	.....	Lju3 II 2r*
.....	.....	.....	.....	.....	S

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.....	.....	.....	.....	.....	Lju3 I 1f
.....	.....	.....	.....	.....	Lju3 I 2r
.....	.....	.....	.....	.....	Lju3 I 3r*
.....	.....	.....	.....	.....	Lju3 II 1f
.....	.....	.....	.....	.....	Lju3 II 2r
.....	.....	.....	.....	.....	Lju3 II 3f*
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.....	.....	.....	.....	.....	Lju3 I 1f
.....	.....	.....	.....	.....	Lju3 I 2r
.....	.....	.....	.....	.....	Lju3 I 3r*
.....	.....	.....	.....	.....	Lju3 II 1f
.....	.....	.....	.....	.....	Lju3 II 2r
.....	.....	.....	.....	.....	Lju3 II 3f*
16150					
T T A C C A T T A G A T					NC_001567
.....	.....	.....	.....	.....	Lju3 I 1f
.....	.....	.....	.....	.....	Lju3 I 2r
.....	.....	.....	.....	.....	Lju3 I 3r*
.....	.....	.....	.....	.....	Lju3 II 1f
.....	.....	.....	.....	.....	Lju3 II 2r
.....	.....	.....	.....	.....	Lju3 II 3f*
.....	.....	.....	.....	.....	W

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
A C . . . . .	.....	.....	.....	.....	Lju3 I 1f
.....	.....	.....	.....	.....	Lju3 I 2r*
.....	.....	.....	.....	.....	Lju3 II 1f
.....	.....	.....	.....	.....	Lju3 II 2r*
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T T A C C A G -					NC_001567
.....	.....	.....	.....	.....	Lju3 I 1f
.....	.....	.....	.....	.....	Lju3 I 2r*
.....	.....	.....	.....	.....	Lju3 II 1f
.....	.....	.....	.....	.....	Lju3 II 2r*
16290	16300	16310			
G G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.....	.....	.....	.....	.....	Lju3 I 1f
.....	.....	.....	.....	.....	Lju3 I 2r*
.....	.....	.....	.....	.....	Lju3 II 1f
.....	.....	.....	.....	.....	Lju3 II 2r*

Abb. 95: Lju 3

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 I 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 I 2r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 2r
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 I 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 I 2r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 2r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
. . . . .	. . . . .				Mar8 I 1f
. . . . .	. . . . .				Mar8 I 2r
. . . . .	. . . . .				Mar8 II 1f
. . . . .	. . . . .				Mar8 II 2r

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 I 1r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 2f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 3r
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 I 1r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 2f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 3r
16150					
T T A C C A T T A G A T					NC_001567
. . . . .	. . . . .				Mar8 I 1r
. . . . .	. . . . .				Mar8 II 1f
. . . . .	. . . . .				Mar8 II 2f
. . . . .	. . . . .				Mar8 II 3r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 I 1r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 I 2f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 2r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 3f
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 I 1r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 I 2f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 2r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 3f
16290	16300	16310			
G C C A T C T C A T C T A A A C G G T C C A T T C T T					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 I 1r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 I 2f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 2r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Mar8 II 3f

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
. . . T					Mar10 I 1f
. A					Mar10 I 2r
. . . . . . . . . . .				. . . . . A	Mar10 II 1f
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
G . T					Mar10 I 1f
G					Mar10 I 2r
G . . . . .	. . . . . A . . . . .	. . . . . A			Mar10 II 1f
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Mar10 I 1f
.					Mar10 I 2r
. . . . .	. . . . . A				Mar10 II 1f

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
. . . . .	. . . . . A . . . . .		. . . . . A		Mar10 I 1f
.					Mar10 I 2r
.					Mar10 II 1f
.					Mar10 II 2r
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
. . . . .	. . . . . A				Mar10 I 1f
. . . . .	. . . . . T				Mar10 I 2r
.					Mar10 II 1f
.					Mar10 II 2r
16150					
T T A C C A T T A G A T					NC_001567
.					Mar10 I 1f
.					Mar10 I 2r
.					Mar10 II 1f
.					Mar10 II 2r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
. . . . .	. . . . .	. . . . . T . . . . .	. . . . . T . . . . .	. . . . .	Mar10 I 1f
. . . . .	. . . . . A A				Mar10 I 2r
.					Mar10 II 1f
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
. . . . .	. . . . .	. . . . . C . . . . .	. . . . . T . . . . .	. . . . .	Mar10 I 1f
. . . . .	. . . . .	. . . . . C . . . . .	. . . . .	. . . . . T	Mar10 I 2r
. . . . .	. . . . .	. . . . . C			Mar10 II 1f
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
. . . . .	. . . . .	. . . . .			Mar10 I 1f
. . . . .	. . . . .	. . . . .			Mar10 I 2r
. . . . .	. . . . .	. . . . .			Mar10 II 1f

Abb. 97: Mar 10

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
. T . C T C C C .					Nes1 I 1f *
. T . C T C C C .					Nes1 I 2r
. T . C T C C C .					Nes1 II 1f
. T . C T C C C .					
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A G A C A T A A T A T G T A T					NC_001567
G G G G G G G G					Nes1 I 1f *
G G G G G G G G					Nes1 I 2r
G G G G G G G G					Nes1 II 1f
.					
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
. C					Nes1 I 1f *
. C					Nes1 I 2r
. C					Nes1 II 1f

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
. T . C T C C C C					Nes1 I 1f
. T . C T C C C C					Nes1 I 2r
. T . C T C C C C					Nes1 II 1f
. T . C T C C C C					Nes1 II 2r *
.					
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
. C C C C C C C					Nes1 I 1f
. C C C C C C C					Nes1 I 2r
. C C C C C C C					Nes1 II 1f
. C C C C C C C					Nes1 II 2r *
.					
16150					
T T A C C A T T A G A T					NC_001567
C					Nes1 I 1f
C					Nes1 I 2r
C					Nes1 II 1f
C					Nes1 II 2r *

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
. T T T T T T					Nes1 I 1f *
. T T T T T T					Nes1 I 2r
. T T T T T T					Nes1 I 1f
.					
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
. C A A A A A A					Nes1 I 1f *
. C A A A A A A					Nes1 I 2r
. C A A A A A A					Nes1 I 1f
.					
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
. T T T					Nes1 I 1f *
. T T T					Nes1 I 2r
. T T T					Nes1 I 1f

Abb. 98: Nes 1

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Nmr3 I 1f
.					Nmr3 I 2r
.					Nmr3 I 3f
.					Nmr3 II 1f
.					Nmr3 II 2r
.					Nmr3 II 3r
.					
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
.					Nmr3 I 1f
.					Nmr3 I 2r
.					Nmr3 I 3f
.					Nmr3 II 1f
.					Nmr3 II 2r
.					Nmr3 II 3r
.					
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Nmr3 I 1f
.					Nmr3 I 2r
.					Nmr3 I 3f
.					Nmr3 II 1f
.					Nmr3 II 2r
.					Nmr3 II 3r

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					Nmr3 I 1f
.					Nmr3 I 2r
.					Nmr3 II 1f
.					Nmr3 II 2r
.					
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					Nmr3 I 1f
.					Nmr3 I 2r
.					Nmr3 II 1f
.					Nmr3 II 2r
.					
16150					
T T A C C A T T A G A T					NC_001567
.					Nmr3 I 1f
.					Nmr3 I 2r
.					Nmr3 II 1f
.					Nmr3 II 2r

C) H5L6 / H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Nmr3 I 1f
.					Nmr3 I 2f
.					Nmr3 I 3r
.					Nmr3 II 1f
.					Nmr3 II 2f
.					
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Nmr3 I 1f
.					Nmr3 I 2f
.					Nmr3 I 3r
.					Nmr3 II 1f
.					Nmr3 II 2f
.					
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.					Nmr3 I 1f
.					Nmr3 I 2f
.					Nmr3 I 3r
.					Nmr3 II 1f
.					Nmr3 II 2f

Abb. 100: Nmr 3

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Nmr22 I 1f
.					Nmr22 I 2r
.					Nmr22 II 1f
.					Nmr22 II 2r
Y					
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
A					Nmr22 I 1f
R					Nmr22 I 2r
.					Nmr22 II 1f
.					Nmr22 II 2r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Nmr22 I 1f
.					Nmr22 I 2r
.					Nmr22 II 1f
.					Nmr22 II 2r

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					Nmr22 I 1f
.					Nmr22 I 2r
.					Nmr22 II 1f
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					Nmr22 I 1f
.					Nmr22 I 2r
.					Nmr22 II 1f
16150					
T T A C C A T T A G A T					NC_001567
.					Nmr22 I 1f
.					Nmr22 I 2r
.					Nmr22 II 1f

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Nmr22 I 1f
.					Nmr22 I 2r
.					Nmr22 II 1f
.					Nmr22 II 2r
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Nmr22 I 1f
.					Nmr22 I 2r
.					Nmr22 II 1f
.					Nmr22 II 2r
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.					Nmr22 I 1f
.					Nmr22 I 2r
.					Nmr22 II 1f
.					Nmr22 II 2r

Abb. 101: Nmr 22

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C C A C A G A A T G A A T T A C C T A					NC_001567
.					Nmr24 I 1f
.					Nmr24 I 2f
.					Nmr24 I 3f
.					Nmr24 II 1f
.					Nmr24 II 2r
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
.					Nmr24 I 1f
.					Nmr24 I 2f
.					Nmr24 I 3f
.					Nmr24 II 1f
.					Nmr24 II 2r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Nmr24 I 1f
.					Nmr24 I 2f
.					Nmr24 I 3f
.					Nmr24 II 1f
.					Nmr24 II 2r

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					Nmr24 I 1f
.					Nmr24 I 2r
.					Nmr24 II 1f
.					Nmr24 II 2r
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					Nmr24 I 1f
.					Nmr24 I 2r
.					Nmr24 II 1f
.					Nmr24 II 2r
16150					
T T A C C A T T A G A T					NC_001567
.					Nmr24 I 1f
.					Nmr24 I 2r
.					Nmr24 II 1f
.					Nmr24 II 2r

C) H5L6 / H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Nmr24 I 1f
.					Nmr24 I 2r
.					Nmr24 I 3f
.					Nmr24 II 1f
.					Nmr24 II 2r
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Nmr24 I 1f
.					Nmr24 I 2r
.					Nmr24 I 3f
.					Nmr24 II 1f
.					Nmr24 II 2r
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.					Nmr24 I 1f
.					Nmr24 I 2r
.					Nmr24 I 3f
.					Nmr24 II 1f
.					Nmr24 II 2r

Abb. 102: Nmr 24

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.	Par1 I 1f
.	Par1 I 2f
.	Par1 II 1f
.	Par1 II 2r*
.	Par1 II 3f*
.	Par1 II 4f*

15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
G	G	Par1 I 1f
G	G	Par1 I 2f
G	G	Par1 II 1f
G	G	Par1 II 2r*
G	G	Par1 II 3f*
G	G	Par1 II 4f*

16010	16020	
A T A G T A C A T T A A A T T A T A T G C		NC_001567
.	C	Par1 I 1f
.	C	Par1 I 2f
.	C	Par1 II 1f
.	C	Par1 II 2r*
.	C	Par1 II 3f*
.	C	Par1 II 4f*

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.	T . C . .	. . . . .	. . . . .	C	Par1 I 1f
.	T . C . .	. . . . .	. . . . .	C	Par1 I 2r
.	T . C . .	. . . . .	. . . . .	C	Par1 II 1f*

16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.	C . . . .	. . . . .	Par1 I 1f
.	C . . . .	. . . . .	Par1 I 2r
.	C . . . .	. . . . .	Par1 II 1f*

16150		
T T A C C A T T A G A T		NC_001567
C . . . .	. . . .	Par1 I 1f
C . . . .	. . . .	Par1 I 2r
C . . . .	. . . .	Par1 II 1f*

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.	Par1 I 1f*
.	Par1 I 2r*
.	Par1 II 1f

16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.	C	A . . . .	. . . . .	Par1 I 1f*
.	C	A . . . .	. . . . .	Par1 I 2r*
.	C	A . . . .	. . . . .	Par1 II 1f

16290	16300	16310	
G C C A T C T C A T C T A A A A C G G T C C A T T C T T			NC_001567
.	T	Par1 I 1f*
.	T	Par1 I 2r*
.	T	Par1 II 1f

D) ZFX1

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Pol2 I 1f
.					Pol2 I 2r
.					Pol2 II 1f
.					Pol2 II 2r
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
.					Pol2 I 1f
.					Pol2 I 2r
.					Pol2 II 1f
.					Pol2 II 2r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Pol2 I 1f
.					Pol2 I 2r
.					Pol2 II 1f
.					Pol2 II 2r

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					Pol2 I 1f
.					Pol2 I 2r
.					Pol2 II 1f
.					Pol2 II 2r
.					Pol2 II 3f *
.					Pol2 II 4f
.					Pol2 II 5r *
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					Pol2 I 1f
.					Pol2 I 2r
.					Pol2 II 1f
.					Pol2 II 2r
.					Pol2 II 3f *
.					Pol2 II 4f
.					Pol2 II 5r *
16150					
T T A C C A T T A G A T					NC_001567
.					Pol2 I 1f
.					Pol2 I 2r
.					Pol2 II 1f
.					Pol2 II 2r
.					Pol2 II 3f *
.					Pol2 II 4f
.					Pol2 II 5r *

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
- - - - -					Pol2 I 1f
					Pol2 I 2r
					Pol2 I 3f*
	Y				Pol2 II 1r
		Y			Pol2 II 2f*
					Pol2 II 3r*
					Pol2 I 2 K1f
					Pol2 I 2 K r
					Pol2 I 2 K3f
					Pol2 I 2 K4f
					Pol2 I 2 K5f
					Pol2 I 2 K6r
					Pol2 I 2 K7r
					Pol2 I 2 K8r

16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
					Pol2 I 1f
					Pol2 I 2r
					Pol2 I 3f*
					Pol2 II 1r
					Pol2 II 2f*
					Pol2 II 3r*
					Pol2 I 2 K1f
					Pol2 I 2 K r
					Pol2 I 2 K3f
					Pol2 I 2 K4f
				C	Pol2 I 2 K5f
					Pol2 I 2 K6r
					Pol2 I 2 K7r
					Pol2 I 2 K8r

16290	16300	16310	
G C C A T C T C A T C T A A A A C G G T C C A T T C T T			NC_001567
			Pol2 I 1f
			Pol2 I 2r
			Pol2 I 3f*
			Pol2 II 1r
			Pol2 II 2f*
			Pol2 II 3r*
			Pol2 I 2 K1f
			Pol2 I 2 K r
			Pol2 I 2 K3f
			Pol2 I 2 K4f
			Pol2 I 2 K5f
			Pol2 I 2 K6r
			Pol2 I 2 K7r
			Pol2 I 2 K8r

D) ZFX1

440	450	460	470	480	
T C C A T A C A C G T G T C T G A C A T T G G A C A C G G T T G A A C A C G T T G T T C A T G A T A G C G T A G T A G A					NM_177490_ZFX
.. T G .. T .. T G .. T .. A .. G .. T .. T .. G .. T ..					AF032866_bosZFX
..					AF032867_bosZFY
..					Pol2 I 1 K1f
..					Pol2 I 1 K2r
..					Pol2 I 1 K3f
..					Pol2 I 1 K4f
..					Pol2 I 1 K5r
..					Pol2 I 1 K6r
..					Pol2 I 1 K8r
..					Pol2 I 1 K7r
..					Pol2 I 1 K9r
..					Pol2 I 1 K10r
..					Pol2 I 2 K1r
..					Pol2 I 2 K2f
..					Pol2 I 2 K3f
..					Pol2 I 2 K4f
..					Pol2 I 2 K5r
..					Pol2 I 2 K6f
..					Pol2 I 2 K7r
..					Pol2 I 2 K8f
..					Pol2 I 2 K9f
..					Pol2 I 2 K10f
..					Pol2 I 2 K11f
..					Pol2 I 2 K12r

E) ZFX Y2

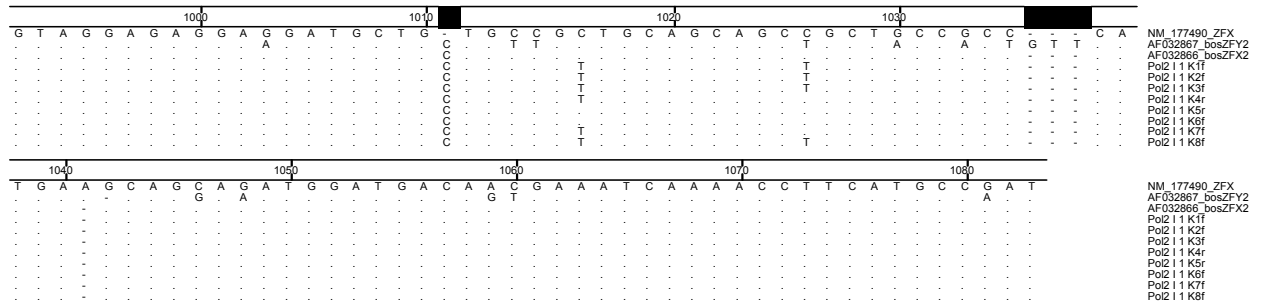


Abb. 104: Pol 2

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Pol4 I 1f
.					Pol4 I 2r
.					Pol4 II 1f
.					Pol4 II 2r
Y					
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
.					Pol4 I 1f
.					Pol4 I 2r
.					Pol4 II 1f
.					Pol4 II 2r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Pol4 I 1f
.					Pol4 I 2r
.					Pol4 II 1f
.					Pol4 II 2r

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.	C	A . . . .	. . . . .	A	Pol4 I 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Pol4 I 2r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Pol4 II 1r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Pol4 II 2r
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.	A . . . .	. . . . .	. . . . .	. . . . .	Pol4 I 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Pol4 I 2r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Pol4 II 1r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Pol4 II 2r
16150					
T T A C C A T T A G A T					NC_001567
.	A				Pol4 I 1f
. . . . .	. . . . .				Pol4 I 2r
. . . . .	. . . . .				Pol4 II 1r
. . . . .	. . . . .				Pol4 II 2r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.	T . G . .	. . . . .	. . . . .	. . . . .	Pol4 I 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Pol4 I 2r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Pol4 I 3r
.	T . T . .	. . . . .	. . . . .	. . . . .	Pol4 II 1r
16240	16250	16260	16270	16280	
G G G G G T C - G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Pol4 I 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Pol4 I 2r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Pol4 I 3r
.	T . . . .	. . . . .	Y . . . .	. . . . .	Pol4 II 1r
16290	16300	16310			
G G C C A T C T C A T C T A A A C G G T C C A T T C T T					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Pol4 I 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Pol4 I 2r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Pol4 I 3r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Pol4 II 1r

Abb. 105: Pol 4

A) H1L2

15910	15920	15930	15940	15950																																													
C	A	C	T	A	G	C	T	A	A	C	A	T	A	A	C	A	C	G	C	C	C	A	T	A	C	A	C	A	G	A	C	C	A	C	A	G	A	A	T	G	A	A	T	T	A	C	C	T	A
																																										NC_001567							
																																										Pol5 I 1f							
																																										Pol5 I 2r							
																																										Pol5 II 1f							
																																										Pol5 II 2r							
15960	15970	15980	15990	16000																																													
C	G	C	A	A	G	G	G	T	A	A	T	G	T	A	C	A	T	A	A	C	A	T	T	A	A	T	G	T	A	A	T	A	A	A	G	A	C	A	T	A	A	T	A	T	G	T	A	T	
																																										NC_001567							
																																										Pol5 I 1f							
																																										Pol5 I 2r							
																																										Pol5 II 1f							
																																										Pol5 II 2r							
16010	16020																																																
A	T	A	G	T	A	C	A	T	T	A	A	A	T	T	A	T	A	T	G	C																													
																		NC_001567																															
																		Pol5 I 1f																															
																		Pol5 I 2r																															
																		Pol5 II 1f																															
																		Pol5 II 2r																															

B) H3L4

16050	16060	16070	16080	16090																																											
G	T	A	C	A	T	G	A	C	C	T	C	T	A	T	A	G	C	A	G	T	A	C	A	T	A	A	T	A	C	A	T	A	T	A	T	T	G	A	C	T	G	T	A	C	A		
																																										NC_001567					
																																										Pol5 I 1f					
																																										Pol5 I 2r					
																																										Pol5 II 1f					
																																										Pol5 II 2r					
16100	16110	16120	16130	16140																																											
T	A	G	T	A	C	A	T	T	A	T	G	T	C	A	A	A	T	T	C	A	T	T	C	T	T	G	A	T	A	G	T	A	T	A	T	C	T	A	T	T	A	T	A	T	T	C	C
																																										NC_001567					
																																										Pol5 I 1f					
																																										Pol5 I 2r					
																																										Pol5 II 1f					
																																										Pol5 II 2r					
16150																																															
T	T	A	C	C	A	T	T	A	G	A	T																																				
											NC_001567																																				
											Pol5 I 1f																																				
											Pol5 I 2r																																				
											Pol5 II 1f																																				
											Pol5 II 2r																																				

C) H5L7

16190	16200	16210	16220	16230																																												
G	C	A	A	C	C	G	C	T	A	G	G	C	A	G	G	G	A	T	C	C	C	T	C	T	T	C	T	C	G	C	T	C	G	G	G	C	C	C	A	T	A	A	A	C	C	G	T	
																																										NC_001567						
																																										Pol5 I 1f						
																																										Pol5 I 2r						
																																										Pol5 II 1f						
16240	16250	16260	16270	16280																																												
G	G	G	G	G	T	C	G	C	T	A	T	C	C	A	A	T	G	A	A	T	T	T	A	C	C	A	G	G	C	A	T	C	T	G	G	T	T	C	T	T	T	C	T	T	C	A	G	G
																																										NC_001567						
																																										Pol5 I 1f						
																																										Pol5 I 2r						
																																										Pol5 II 1f						
16290	16300	16310																																														
G	C	C	A	T	C	T	C	A	T	C	T	A	A	A	A	C	G	G	T	C	C	A	T	T	C	T	T																					
																									NC_001567																							
																									Pol5 I 1f																							
																									Pol5 I 2r																							
																									Pol5 II 1f																							

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
. A R R R					Que1 I 1f
.					Que1 I 2r
.					Que1 II 1f
.					Que1 II 2r
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
. A . A A					Que1 I 1f
. R					Que1 I 2r
.					Que1 II 1f
.					Que1 II 2r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
. A					Que1 I 1f
.					Que1 I 2r
.					Que1 II 1f
.					Que1 II 2r

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
. T					Que1 I 1f
. T					Que1 I 2r
.					Que1 II 1f
. T					Que1 II 2r
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					Que1 I 1f
. N					Que1 I 2r
.					Que1 II 1f
.					Que1 II 2r
16150					
T T A C C A T T A G A T					NC_001567
.					Que1 I 1f
. T A					Que1 I 2r
.					Que1 II 1f
.					Que1 II 2r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Que1 I 1f
.					Que1 I 2r
.					Que1 II 1f
.					Que1 II 2r
16240	16250	16260	16270	16280	
G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Que1 I 1f
.					Que1 I 2r
. R					Que1 II 1f
.					Que1 II 2r
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.					Que1 I 1f
.					Que1 I 2r
.					Que1 II 1f
.					Que1 II 2r

Abb. 107: Que 1

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
. Y					Que2 I 1f
.					Que2 I 1f
.					Que2 II 1f
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A G A C A T A A T A T G T A T					NC_001567
T					Que2 I 1f
. A					Que2 I 1f
.					Que2 II 1f
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
. A					Que2 I 1f
.					Que2 I 1f
.					Que2 II 1f

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
. R					Que2 I 1f
.					Que2 II 1r
.					Que2 II 2f
1610	16110	16120	16130		
T A G T A C A T T A - T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C					NC_001567
.					Que2 I 1f
. R A Y					Que2 II 1r
.					Que2 II 2f
16140	16150				
C T T A C C A T T A G A T					NC_001567
.					Que2 I 1f
.					Que2 II 1r
. A					Que2 II 2f

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Que2 I 1f
. R					Que2 I 2r
.					Que2 II 1f
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Que2 I 1f
.					Que2 I 2r
.					Que2 II 1f
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
. T					Que2 I 1f
.					Que2 I 2r
.					Que2 II 1f

Abb. 108: Que 2

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Que3 I 1f
.					Que3 I 2r
.					Que3 II 1f
.					Que3 II 2r
.					Que3 II 3f*
.					
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
.					Que3 I 1f
.					Que3 I 2r
.					Que3 II 1f
.					Que3 II 2r
.					Que3 II 3f*
.					
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Que3 I 1f
.					Que3 I 2r
.					Que3 II 1f
.					Que3 II 2r
.					Que3 II 3f*

B) H3L4

16050	16060	16070	16080		
G - T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T - G A C T G T A				NC_001567	
.				Que3 I 1f	
.				Que3 I 2r	
.				Que3 I 3f	
.				Que3 II 1f	
.				Que3 II 2r	
.					
16090	16100	16110	16120	16130	
C A T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T					NC_001567
.					Que3 I 1f
.					Que3 I 2r
.					Que3 I 3f
.					Que3 II 1f
.					Que3 II 2r
.					
16140	16150				
C C T T A C C A T T A G A T					NC_001567
.					Que3 I 1f
.					Que3 I 2r
.					Que3 I 3f
.					Que3 II 1f
.					Que3 II 2r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A - T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G					NC_001567
.					Que3 I 1r
.					Que3 I 2f
.					Que3 II 1f
.					
16240	16250	16260	16270	16280	
T G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G					NC_001567
.					Que3 I 1r
.					Que3 I 2f
.					Que3 II 1f
.					
16290	16300	16310			
G G C C A T C T C A T C T A A A C G G T C C A T T C T T					NC_001567
.					Que3 I 1r
.					Que3 I 2f
.					Que3 II 1f

Abb. 109: Que 3

16050																				16060																				16070																				16080																				16090																				
G	T	A	C	A	T	G	A	C	C	T	C	T	A	T	A	G	C	A	G	T	A	C	A	T	A	A	T	A	C	A	T	A	T	A	A	T	T	A	T	T	G	A	C	T	G	T	A	C	A	NC_001567																																																		
.	T	.	C	Ruf4 I 1r																																											
.	T	.	C	Ruf4 II 1f																																												
.	T	.	C	Ruf4 II 2r																																												
16100																				16110																				16120																				16130																				16140																				
T	A	G	T	A	C	A	T	T	A	T	G	T	C	A	A	A	T	T	C	A	T	T	C	T	T	G	A	T	A	G	T	A	T	A	T	C	T	A	T	T	A	T	A	T	A	T	T	C	C	NC_001567																																																		
.	Ruf4 I 1r																																										
.	Ruf4 II 1f																																											
.	Ruf4 II 2r																																											
16150																																																																																																				
T	T	A	C	C	A	T	T	A	G	A	T	NC_001567																																												
C	Ruf4 I 1r																																										
.	.	.	T	T	Ruf4 II 1f																																										
C	Ruf4 II 2r																																									

Abb. 111: Ruf 4

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 I 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 I 2r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 II 1r
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
A A . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 I 1f
A A . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 I 2r
A A . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 II 1r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
. . . . .	. . . . .				Sieg1 I 1f
. . . . .	. . . . .				Sieg1 I 2r
. . . . .	. . . . .				Sieg1 II 1r

B) H3L4

16050	16060	16070	16080		
G T A C A T G A C C T C T A T - A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C				NC_001567	
. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 I 1f	
. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 I 2r *	
. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 II 1r	
16090	16100	16110	16120	16130	
A T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 I 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 I 2r *
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 II 1r
16140	16150				
C T T A C C A T T A G A T					NC_001567
. . . . .	. . . . .				Sieg1 I 1f
. . . . .	. . . . .				Sieg1 I 2r *
. . . . .	. . . . .				Sieg1 II 1r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G - G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 I 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 I 2r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 I 3f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 I 4r *
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 II 1f
16240	16250	16260	16270	16280	
T G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 I 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 I 2r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 I 3f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 I 4r *
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Sieg1 II 1f
16290	16300	16310			
G G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
. . . . .	. . . . .	. . . . .			Sieg1 I 1f
. . . . .	. . . . .	. . . . .			Sieg1 I 2r
. . . . .	. . . . .	. . . . .			Sieg1 I 3f
. . . . .	. . . . .	. . . . .			Sieg1 I 4r *
. . . . .	. . . . .	. . . . .			Sieg1 II 1f

Abb. 112: Sieg 1

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Svo1 I 1f
.					Svo1 I 2r
.					Svo1 II 1f
.					Svo1 II 2r
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A G A C A T A A T A T G T A T					NC_001567
.					Svo1 I 1f
.					Svo1 I 2r
.					Svo1 II 1f
.					Svo1 II 2r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Svo1 I 1f
.					Svo1 I 2r
.					Svo1 II 1f
.					Svo1 II 2r

B) H3L4

16050	16060	16070	16080		
G T A C A T G A C C T C T A T A G C - A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C				NC_001567	
.				Svo1 I 1r	
.				Svo1 I 2r	
.				Svo1 I 3r	
.				Svo1 II 1f	
.				Svo1 II 2r	
16090	16100	16110	16120	16130	
A T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C					NC_001567
.					Svo1 I 1r
.					Svo1 I 2r
.					Svo1 I 3r
.					Svo1 II 1f
.					Svo1 II 2r
16140	16150				
C T T A C C A T T A G A T					NC_001567
.					Svo1 I 1r
.					Svo1 I 2r
.					Svo1 I 3r
.					Svo1 II 1f
.					Svo1 II 2r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Svo1 I 1r
.					Svo1 I 2f
.					Svo1 II 1r
.					Svo1 II 2f
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Svo1 I 1r
.					Svo1 I 2f
.					Svo1 II 1r
.					Svo1 II 2f
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.					Svo1 I 1r
.					Svo1 I 2f
.					Svo1 II 1r
.					Svo1 II 2f

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
					Svo3 I 1f
					Svo3 I 2r
		Y			Svo3 II 1f
				Y	Svo3 II 2r
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
G					Svo3 I 1f
G				G	Svo3 I 2r
G				G	Svo3 II 1f
G				G	Svo3 II 2r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
				S	Svo3 I 1f
					Svo3 I 2r
					Svo3 II 1f
					Svo3 II 2r

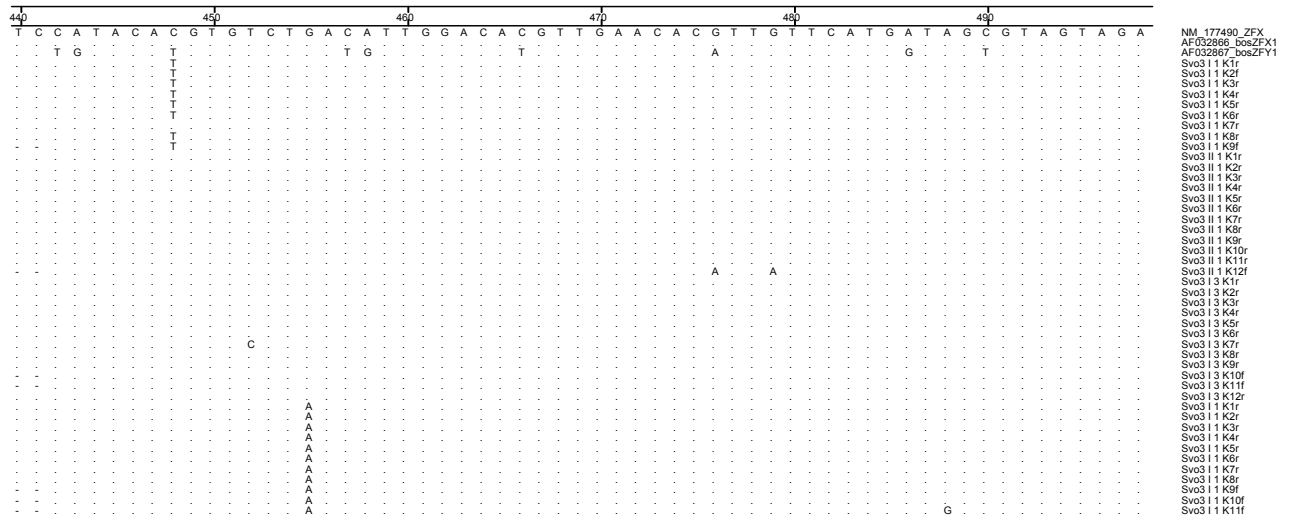
B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
	T . C	T			Svo3 I 1r
	T . C	T	C	C	Svo3 I 2r
	T . C	T	C	C	Svo3 II 1f
	T . C	T	C	C	Svo3 II 2f
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
	W				Svo3 I 1r
			C		Svo3 I 2r
			C		Svo3 II 1f
			C		Svo3 II 2f
16150					
T T A C C A T T A G A T					NC_001567
					Svo3 I 1r
					Svo3 I 2r
					Svo3 II 1f
					Svo3 II 2f

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
				T	Svo3 I 1f
				T	Svo3 I 2f
				T	Svo3 I 3r
				T	Svo3 II 1f
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
		C	A		Svo3 I 1f
		C	A		Svo3 I 2f
		C	A		Svo3 I 3r
		C	A		Svo3 II 1f
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
					Svo3 I 1f
					Svo3 I 2f
					Svo3 I 3r
					Svo3 II 1f

D) ZFX1



E) ZFX2

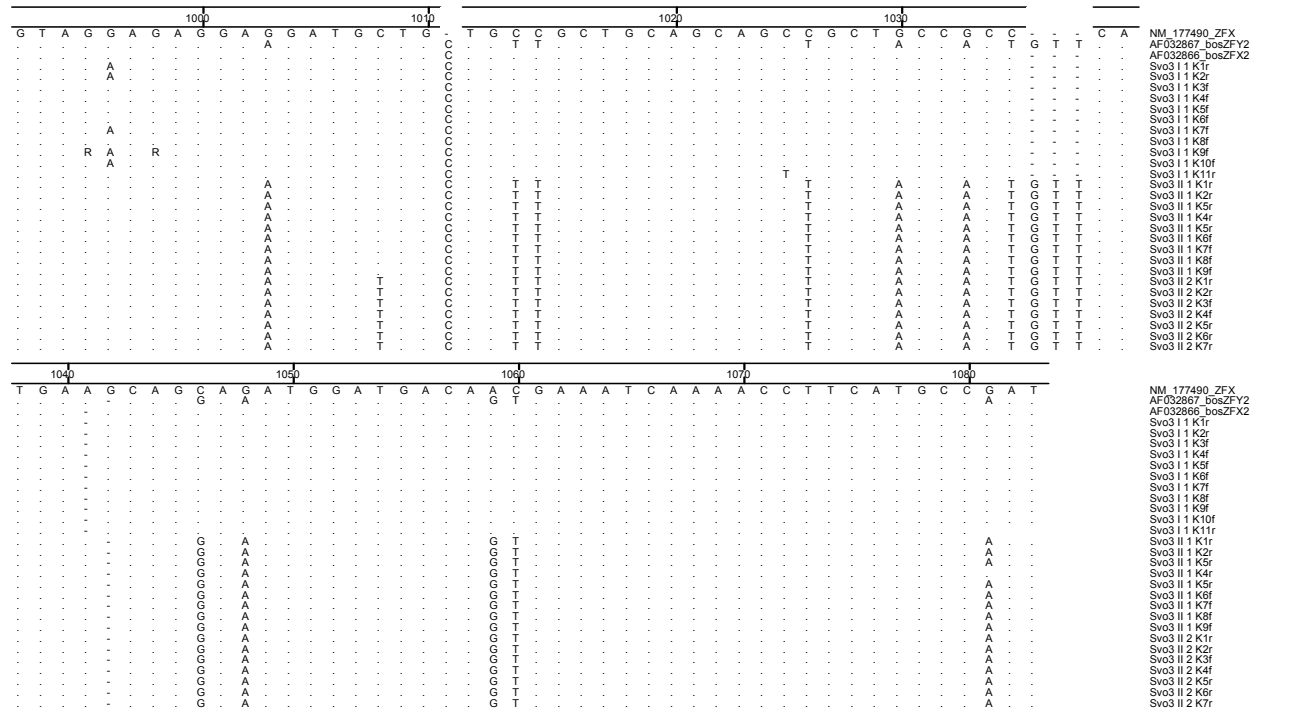


Abb. 115: Svo 3

A) H1L2

15910	15920	15930	15940	15950																																													
C	A	C	T	A	G	C	T	A	A	C	A	T	A	A	C	A	C	G	C	C	C	A	T	A	C	A	C	A	G	A	C	C	A	C	A	G	A	A	T	G	A	A	T	T	A	C	C	T	A
NC_001567																																																	
Sze1 I 1f																																																	
Sze1 II 1f																																																	
Sze1 II 2r																																																	
15960	15970	15980	15990	16000																																													
C	G	C	A	A	G	G	G	T	A	A	T	G	T	A	C	A	T	A	A	C	A	T	T	A	A	T	G	T	A	A	T	A	A	G	A	C	A	T	A	A	T	A	T	G	T	A	T		
NC_001567																																																	
Sze1 I 1f																																																	
Sze1 II 1f																																																	
Sze1 II 2r																																																	
16010	16020																																																
A	T	A	G	T	A	C	A	T	T	A	A	A	T	T	A	T	A	T	G	C																													
NC_001567																																																	
Sze1 I 1f																																																	
Sze1 II 1f																																																	
Sze1 II 2r																																																	

B) H3L4

16050	16060	16070	16080	16090																																											
G	T	A	C	A	T	G	A	C	C	T	C	T	A	T	A	G	C	A	G	T	A	C	A	T	A	A	T	A	C	A	T	A	T	T	A	T	T	G	A	C	T	G	T	A	C	A	
NC_001567																																															
Sze1 I 1f																																															
Sze1 I 2r																																															
Sze1 II 1r																																															
16100	16110	16120	16130	16140																																											
T	A	G	T	A	C	A	T	T	A	T	G	T	C	A	A	A	T	T	C	A	T	T	C	T	T	G	A	T	A	G	T	A	T	A	T	C	T	A	T	T	A	T	A	T	T	C	C
NC_001567																																															
Sze1 I 1f																																															
Sze1 I 2r																																															
Sze1 II 1r																																															
16150																																															
T	T	A	C	C	A	T	T	A	G	A	T																																				
NC_001567																																															
Sze1 I 1f																																															
Sze1 I 2r																																															
Sze1 II 1r																																															

C) H5L7

10	20	30	40																																													
G	C	A	A	C	C	C	G	C	T	A	G	G	C	A	G	G	G	A	T	C	C	C	T	C	T	T	C	T	C	G	C	T	C	G	G	G	C	C	C	A	T	A	A	A	C	C	G	T
NC_001567																																																
Sze1 I 1f																																																
Sze1 II 1f																																																
Sze1 II 2r																																																
50	60	70	80	90																																												
G	G	G	G	G	T	C	G	C	T	A	T	C	C	A	A	T	G	A	A	T	T	T	A	C	C	A	G	G	C	A	T	C	T	G	G	T	T	C	T	T	T	C	T	T	C	A	G	G
NC_001567																																																
Sze1 I 1f																																																
Sze1 II 1f																																																
Sze1 II 2r																																																
100	110	120																																														
G	C	C	A	T	C	T	C	A	T	C	T	A	A	A	A	C	G	G	T	C	C	A	T	T	C	T																						
NC_001567																																																
Sze1 I 1f																																																
Sze1 II 1f																																																
Sze1 II 2r																																																

Abb. 116: Sze 1

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Sze2 I 1f
.					Sze2 I 2r
.	T				Sze2 I 3f
.					Sze2 II 1f
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
G				G	Sze2 I 1f
G				G	Sze2 I 2r
G				G	Sze2 I 3f
G				G	Sze2 II 1f
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Sze2 I 1f
.					Sze2 I 2r
.					Sze2 I 3f
.					Sze2 II 1f

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.	T . C	T . . . . .	. . . . .	C	Sze2 I 1f
.	T . C	T . . . . .	. . . . .	C	Sze2 I 2f
.	T . C	T . . . . .	. . . . .	C	Sze2 II 1f
.	T . C	T . . . . .	. . . . .	C	Sze2 II 2f
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.			C . . . . .	. . . . .	Sze2 I 1f
.			C . . . . .	. . . . .	Sze2 I 2f
.			C . . . . .	. . . . .	Sze2 II 1f
.			C	T	Sze2 II 2f
16150					
T T A C C A T T A G A T					NC_001567
.					Sze2 I 1f
.					Sze2 I 2f
.					Sze2 II 1f
.					Sze2 II 2f

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C C A C A G A A T G A A T T A C C T A					NC_001567
.					Tb07 I 1f
.					Tb07 I 2r
.					Tb07 II 1f
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A G A C A T A A T A T G T A T					NC_001567
.					Tb07 I 1f
.					Tb07 I 2r
.					Tb07 II 1f
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Tb07 I 1f
.					Tb07 I 2r
.					Tb07 II 1f

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					Tb07 I 1f
.					Tb07 I 2r *
.					Tb07 II 1r
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					Tb07 I 1f
.					Tb07 I 2r *
.					Tb07 II 1r
16150					
T T A C C A T T A G A T					NC_001567
.					Tb07 I 1f
.					Tb07 I 2r *
.					Tb07 II 1r

C) H5L6 / L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Tb07 I 1f
.					Tb07 I 2r
.					Tb07 I 3f
.					Tb07 I 4r *
.					Tb07 II 1r
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Tb07 I 1f
.					Tb07 I 2r
.					Tb07 I 3f
.					Tb07 I 4r *
.					Tb07 II 1r
16290	16300	16310			
G C C A T C T C A T C T A A A C G G T C C A T T C T T					NC_001567
.					Tb07 I 1f
.					Tb07 I 2r
.					Tb07 I 3f
.					Tb07 I 4r *
.					Tb07 II 1r

Abb. 118: Tb 07

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Tre1 I 1f
.					Tre1 I 2r
.					Tre1 II 1f
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
.					Tre1 I 1f
.					Tre1 I 2r
.					Tre1 II 1f
A A A A .					
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Tre1 I 1f
.					Tre1 I 2r
.					Tre1 II 1f

B) H3L4

16050	16060	16070	16080		
G T A C A T G A C C T C T A T A G C - A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C				NC_001567	
.				Tre1 I 1f	
.				Tre1 II 1f	
.				Tre1 II 2r	
A T					
16090	16100	16110	16120	16130	
A T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C					NC_001567
.					Tre1 I 1f
.					Tre1 II 1f
.					Tre1 II 2r
16140	16150				
C T T A C C A T T A G A T					NC_001567
.					Tre1 I 1f
.					Tre1 II 1f
.					Tre1 II 2r
. T A					

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Tre1 I 1f
.					Tre1 I 2r
.					Tre1 II 1f
. T					
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Tre1 I 1f
.					Tre1 I 2r
.					Tre1 II 1f
. A					
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.					Tre1 I 1f
.					Tre1 I 2r
.					Tre1 II 1f
. G					

Abb. 119: Tre 1

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C C A C A G A A T G A A T T A C C T A					NC_001567
.					Tre4 I 1f
.					Tre4 I 2r
.					Tre4 II 1f
.					Tre4 II 2r
15960	15970	15980	15990	16000	
C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A G A C A T A A T A T G T A T					NC_001567
.					Tre4 I 1f
.					Tre4 I 2r
.					Tre4 II 1f
.					Tre4 II 2r
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Tre4 I 1f
.					Tre4 I 2r
.					Tre4 II 1f
.					Tre4 II 2r

B) H3L4

16050	16060	16070	16080		
G T A C A T G A C C T C T A T A G C - A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C				NC_001567	
.				Tre4 I 1f	
.				Tre4 I 2r	
.				Tre4 II 1f	
16090	16100	16110	16120	16130	
A T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C					NC_001567
.					Tre4 I 1f
.					Tre4 I 2r
.					Tre4 II 1f
16140	16150				
C T T A C C A T T A G A T					NC_001567
.					Tre4 I 1f
.					Tre4 I 2r
.					Tre4 II 1f

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Tre4 I 1f
.					Tre4 I 2f
.					Tre4 I 3r
.					Tre4 I 4f
.					Tre4 II 1f
.					Tre4 II 2r
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Tre4 I 1f
.					Tre4 I 2f
.					Tre4 I 3r
.					Tre4 I 4f
.					Tre4 II 1f
.					Tre4 II 2r
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.					Tre4 I 1f
.					Tre4 I 2f
.					Tre4 I 3r
.					Tre4 I 4f
.					Tre4 II 1f
.					Tre4 II 2r

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
Y	T				Wan1 I 1f*
					Wan1 I 2r
					Wan1 I 3r
					Wan1 II 1r
			T		Wan1 II 2r
				T	Wan1 II 3f
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
T					Wan1 I 1f*
					Wan1 I 2r
A					Wan1 I 3r
		R			Wan1 II 1r
					Wan1 II 2r
					Wan1 II 3f
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
					Wan1 I 1f*
					Wan1 I 2r
					Wan1 I 3r
					Wan1 II 1r
					Wan1 II 2r
					Wan1 II 3f

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
					Wan1 I 1f
					Wan1 I 2r
					Wan1 II 1f
					Wan1 II 2r
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
					Wan1 I 1f
					Wan1 I 2r
					Wan1 II 1f
					Wan1 II 2r
16150					
T T A C C A T T A G A T					NC_001567
					Wan1 I 1f
					Wan1 I 2r
					Wan1 II 1f
					Wan1 II 2r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
Y	R				Wan1 I 1f
					Wan1 II 1r
					Wan1 II 2r
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
				Y	Wan1 I 1f
					Wan1 II 1r
					Wan1 II 2r
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
				G	Wan1 I 1f
					Wan1 II 1r
					Wan1 II 2r

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C A T A C A C A G A C C A C A G A A T G A A T T A C C T A					NC_001567
.					Wan2 I 1f
.					Wan2 I 2r
.					Wan2 I 1f
15960	15970	15980	15990	16000	
C G C A A G G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A T					NC_001567
.					Wan2 I 1f
.					Wan2 I 2r
.					Wan2 I 1f
16010	16020				
A T A G T A C A T T A A A T T A T A T G C					NC_001567
.					Wan2 I 1f
.					Wan2 I 2r
.					Wan2 I 1f

B) H3L4

16050	16060	16070	16080	16090	
G T A C A T G A C C T C T A T A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C A					NC_001567
.					Wan2 I 1f
.					Wan2 I 2r
.					Wan2 II 1r
16100	16110	16120	16130	16140	
T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C C					NC_001567
.					Wan2 I 1f
.					Wan2 I 2r
.					Wan2 II 1r
16150					
T T A C C A T T A G A T					NC_001567
.					Wan2 I 1f
.					Wan2 I 2r
.					Wan2 II 1r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G T					NC_001567
.					Wan2 I 1f
.					Wan2 I 2r*
.					Wan2 II 1f
16240	16250	16260	16270	16280	
G G G G G T C G C T A T C C A A T G A A T T T T A C C A G G C A T C T G G T T C T T T C T T C A G G					NC_001567
.					Wan2 I 1f
.					Wan2 I 2r*
.					Wan2 II 1f
16290	16300	16310			
G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
.					Wan2 I 1f
.					Wan2 I 2r*
.					Wan2 II 1f

Abb. 123: Wan 2

A) H1L2

15910															15920															15930															15940															15950															NC_001567 Wib I 1f Wib I 2r Wib II 1f Wib II 2r
C	A	C	T	A	G	C	T	A	A	C	A	T	A	A	C	A	C	A	C	G	C	C	C	-	A	T	A	C	A	C	A	G	A	C	C	A	C	A	G	A	A	T	G	A	A	T	T	A	C	C	T																								
.																		
.																			
15960															15970															15980															15990															16000															NC_001567 Wib I 1f Wib I 2r Wib II 1f Wib II 2r
A	C	G	C	A	A	G	G	G	G	T	A	A	T	G	T	A	C	A	T	A	A	C	A	T	T	A	A	T	G	T	A	A	A	A	G	A	C	A	T	A	A	T	A	T	G	T	A																												
.																		
.																		
16010															16020															NC_001567 Wib I 1f Wib I 2r Wib II 1f Wib II 2r																																													
T	A	T	A	G	T	A	C	A	T	T	A	A	A	T	T	A	T	A	T	G	C																																																						
.																	
.																	

B) H3L4

16050															16060															16070															16080															NC_001567 Wib I 1f Wib II 1f Wib II 2f Wib II 3r															
G	T	A	C	A	T	G	A	C	C	T	C	T	A	T	-	A	G	C	A	G	T	A	C	A	T	A	A	T	A	C	A	T	A	T	A	T	T	G	A	C	T	G	T	A	C																														
.																	
.																	
16090															16100															16110															16120															16130															NC_001567 Wib I 1f Wib II 1f Wib II 2f Wib II 3r
A	T	A	G	T	A	C	A	T	T	A	T	G	T	C	A	A	A	T	T	C	A	T	T	C	T	T	G	A	T	A	G	T	A	T	A	T	C	T	A	T	T	A	T	A	T	T	C																												
.																
.															
16140															16150															NC_001567 Wib I 1f Wib II 1f Wib II 2f Wib II 3r																																													
C	T	T	A	C	C	A	T	T	A	G	A	T																																																															
.													
.														

C) H5L7

16190															16200															16210															16220															16230															NC_001567 Wib I 1f Wib I 2r Wib II 1f
G	C	A	A	C	C	G	C	T	A	G	G	C	A	G	-	G	G	A	T	C	C	C	T	C	T	T	C	T	C	G	C	T	C	C	G	G	G	C	C	C	A	T	A	A	A	C	C	G																											
.													
.													
16240															16250															16260															16270															16280															NC_001567 Wib I 1f Wib I 2r Wib II 1f
T	G	G	G	G	T	C	G	C	T	A	T	C	C	A	A	T	G	A	A	T	T	T	A	C	A	G	G	C	A	T	C	T	G	G	T	T	C	T	T	T	C	T	T	C	T	T	C	A	G																										
.											
.											
16290															16300															16310															NC_001567 Wib I 1f Wib I 2r Wib II 1f																														
G	G	C	C	A	T	C	T	C	A	T	C	T	A	A	A	A	C	G	G	T	C	C	A	T	T	C	T	T																																															
.										
.										

Abb. 124: Wib

A) H1L2

15910	15920	15930	15940	15950	
C A C T A G C T A A C A T A A C A C G C C C	A T A C A C A G A C C A C A G A A T G A A T T A C C T				NC_001567
.	G C T A	C	T . T	C . C G C . G . . C	Wib1 I 1f
.	G C T A	C	T . T	C . C G C . G . . C	Wib1 II 1f
.	G C T A	C	T . T	C . C G C . G . . C	Wib1 II 2r
15960	15970	15980	15990	16000	
A C G C A A G G G T A A T G T A C A T A A C A T T A A T G T A A T A A A G A C A T A A T A T G T A					NC_001567
. A . . . . .	. A . . . . .	. T . . . . .	. T . . . . .	. . . . .	Wib1 I 1f
. A . . . . .	. A . . . . .	. T . . . . .	. T . . . . .	. . . . .	Wib1 II 1f
. A . . . . .	. A . . . . .	. T . . . . .	. T . . . . .	. . . . .	Wib1 II 2r
16010	16020				
T A T A G T A C A T T A A A T T A T A T G C					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Wib1 I 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Wib1 II 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Wib1 II 2r

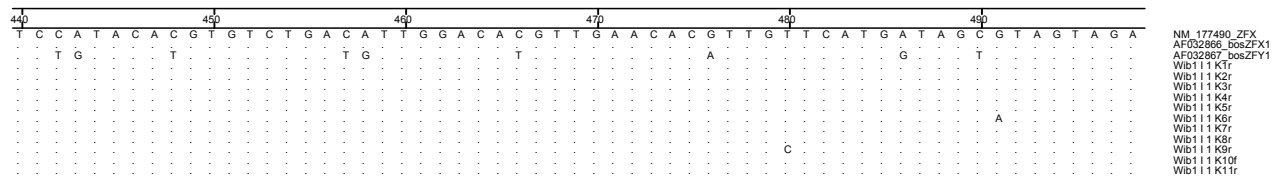
B) H3L4

16050	16060	16070	16080		
G T A C A T G A C C T C T A T	A G C A G T A C A T A A T A C A T A T A A T T A T T G A C T G T A C			NC_001567	
.	T G A	T A T	C	A . T	Wib1 I 1f
.	T G A	T A T	C	A . T	Wib1 I 2r
.	T G A	T A T	C	A . T	Wib1 II 1r
16090	16100	16110	16120	16130	
A T A G T A C A T T A T G T C A A A T T C A T T C T T G A T A G T A T A T C T A T T A T A T A T T C					NC_001567
. . . . .	. A C . T . . . . .	. G . C . . . . .	. T . . . . .	. G . A C . . . . .	. . . . .
. . . . .	. A C . T . . . . .	. G . C . . . . .	. T . . . . .	. G . A C . . . . .	. . . . .
. . . . .	. A C . T . . . . .	. G . C . . . . .	. T . . . . .	. G . A C . . . . .	. . . . .
16140	16150				
C T T A C C A T T A G A T					NC_001567
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Wib1 I 1f
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Wib1 I 2r
. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	Wib1 II 1r

C) H5L7

16190	16200	16210	16220	16230	
G C A A C C C G C T A G G C A G	G G A T C C C T C T T C T C G C T C C G G G C C C A T A A A C C G				NC_001567
. . . . .	. A A . . . . .	. C T T . . . . .	. . . . .	. G	Wib1 I 1f
. . . . .	. A A . . . . .	. C T T . . . . .	. . . . .	. G	Wib1 II 1f
. . . . .	. A A . . . . .	. C T T . . . . .	. . . . .	. G	Wib1 II 2r
16240	16250	16260	16270	16280	
T G G G G G T C G C T A T C C A A T G A A T T T T A C C A G G C A T C T G G T T C T T T C T T C A G					NC_001567
. . . . .	. T T . . . . .	. C . . . . .	. T . . . . .	. A	Wib1 I 1f
. . . . .	. T T . . . . .	. C . . . . .	. T . . . . .	. A	Wib1 II 1f
. . . . .	. T T . . . . .	. C . . . . .	. T . . . . .	. A	Wib1 II 2r
16290	16300	16310			
G G C C A T C T C A T C T A A A A C G G T C C A T T C T T					NC_001567
. . . . .	. C . . . . .	. . . . .	. . . . .	. . . . .	Wib1 I 1f
. . . . .	. C . . . . .	. . . . .	. . . . .	. . . . .	Wib1 II 1f
. . . . .	. C . . . . .	. . . . .	. . . . .	. . . . .	Wib1 II 2r

D) ZFX Y1



E) ZFX Y2

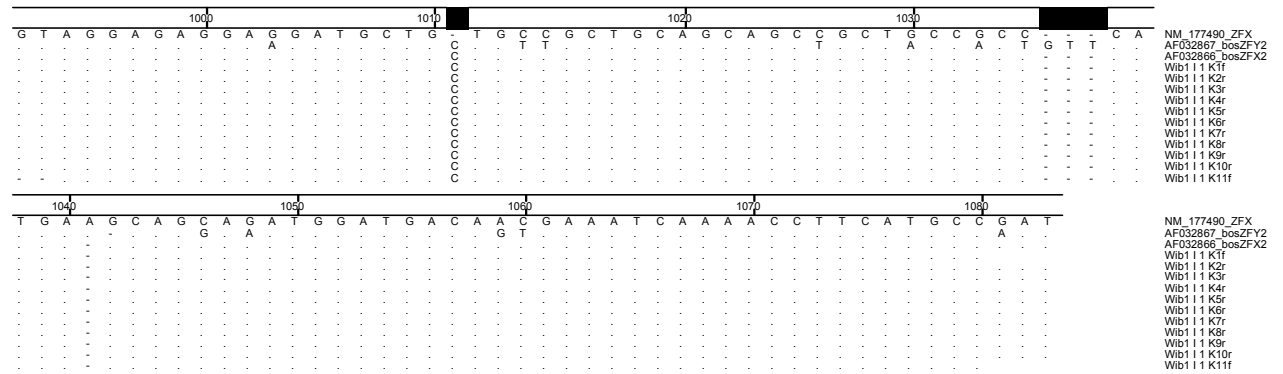


Abb. 125: Wib 1

