





	1	10	20	30	40	50	60
Identity							
AR39	TGAGATCTTT	GCATTAGTAC	CACGACTCAA	TACAATCGCT	TGCACCGAAG	CTATCATCAA	
CWL029	TGAGATCTTT	GCATTAGTAC	CACGACTCAA	TACAATCGCT	TGCACCGAAG	CTATCATCAA	
J138	TGAGATCTTT	GCATTAGTAC	CACGACTCAA	TACAATCGCT	TGCACCGAAG	CTATCATCAA	
TW183	TGAGATCTTT	GCATTAGTAC	CACGACTCAA	TACAATCGCT	TGCACCGAAG	CTATCATCAA	
TOR1	TGAGATCTTT	GCATTAGTAC	CACGACTCAA	TACAATCGCT	TGCACCGAAG	CTATCATCAA	
WA97001	TGAGATCTTT	GCATTAGTAC	CACGACTCAA	TACAATCGCT	TGCACCGAAG	CTATCATCAA	
	70	80	90	100	110	120	
Identity							
AR39	AAACCTCCCC	AAAGCAGATA	TCCATGTACA	CCTTCCTGGG	ACCATAACAC	CTCAATTAGC	
CWL029	AAACCTCCCC	AAAGCAGATA	TCCATGTACA	CCTTCCTGGG	ACCATAACAC	CTCAATTAGC	
J138	AAACCTCCCC	AAAGCAGATA	TCCATGTACA	CCTTCCTGGG	ACCATAACAC	CTCAATTAGC	
TW183	AAACCTCCCC	AAAGCAGATA	TCCATGTACA	CCTTCCTGGG	ACCATAACAC	CTCAATTAGC	
TOR1	AAACCTCCCC	AAAGCAGATA	TCCATGTACA	CCTTCCTGGG	ACCATAACAC	CTCAATTAGC	
WA97001	AAACCTCCCC	AAAGCAGATA	TCCATGTACA	CCTTCCTGGG	ACCATAACAC	CTCAATTAGC	
	130	140	150	160	170	180	
Identity							
AR39	TTGGATTTTA	GGTGTGAAAA	ATGGGTTCCTT	AAAATGGTCT	TATAATTCTT	GGACCAATCA	
CWL029	TTGGATTTTA	GGTGTGAAAA	ATGGGTTCCTT	AAAATGGTCT	TATAATTCTT	GGACCAATCA	
J138	TTGGATTTTA	GGTGTGAAAA	ATGGGTTCCTT	AAAATGGTCT	TATAATTCTT	GGACCAATCA	
TW183	TTGGATTTTA	GGTGTGAAAA	ATGGGTTCCTT	AAAATGGTCT	TATAATTCTT	GGACCAATCA	
TOR1	TTGGATTTTA	GGTGTGAAAA	ATGGGTTCCTT	AAAATGGTCT	TATAATTCTT	GGACCAATCA	
WA97001	TTGGATTTTA	GGTGTGAAAA	ATGGGTTCCTT	AAAATGGTCT	TATAATTCTT	GGACCAATCA	
	190	200	210	220	230	240	
Identity							
AR39	TCGATTACTT	TCTCCTAAGA	ATCCTCATAA	ACAATACTCC	AATATTTTCC	GAAACTTTCA	
CWL029	TCGATTACTT	TCTCCTAAGA	ATCCTCATAA	ACAATACTCC	AATATTTTCC	GAAACTTTCA	
J138	TCGATTACTT	TCTCCTAAGA	ATCCTCATAA	ACAATACTCC	AATATTTTCC	GAAACTTTCA	
TW183	TCGATTACTT	TCTCCTAAGA	ATCCTCATAA	ACAATACTCC	AATATTTTCC	GAAACTTTCA	
TOR1	TCGATTACTT	TCTCCTAAGA	ATCCTCATAA	ACAATACTCC	AATATTTTCC	GAAACTTTCA	
WA97001	TCGATTACTT	TCTCCTAAGA	ATCCTCATAA	ACAATACTCC	AATATTTTCC	GAAACTTTCA	

	250	260	270	280	290	300
Identity						
AR39	AGATATCTGT	CACGAAAAGG	ATCCGGATTT	AAGTGTATTA	CAATATAATA	TCTTAAATTA
CWL029	AGATATCTGT	CACGAAAAGG	ATCCGGATTT	AAGTGTATTA	CAATATAATA	TCTTAAATTA
J138	AGATATCTGT	CACGAAAAGG	ATCCGGATTT	AAGTGTATTA	CAATATAATA	TCTTAAATTA
TW183	AGATATCTGT	CACGAAAAGG	ATCCGGATTT	AAGTGTATTA	CAATATAATA	TCTTAAATTA
TOR1	AGATATCTGT	CACGAAAAGG	ATCCGGATTT	AAGTGTATTA	CAATATAATA	TCTTAAATTA
WA97001	AGATATCTGT	CACGAAAAGG	ATCCGGATTT	AAGTGTATTA	CAATATAATA	TCTTAAATTA

	310	320	330	340	350	360
Identity						
AR39	CGATTTTAAT	AGCTTTGATA	GAGTGATGGC	TACAGTACAA	GGACATCGCT	TTCCTCCTGG
CWL029	CGATTTTAAT	AGCTTTGATA	GAGTGATGGC	TACAGTACAA	GGACATCGCT	TTCCTCCTGG
J138	CGATTTTAAT	AGCTTTGATA	GAGTGATGGC	TACAGTACAA	GGACATCGCT	TTCCTCCTGG
TW183	CGATTTTAAT	AGCTTTGATA	GAGTGATGGC	TACAGTACAA	GGACATCGCT	TTCCTCCTGG
TOR1	CGATTTTAAT	AGCTTTGATA	GAGTGATGGC	TACAGTACAA	GGACATCGCT	TTCCTCCTGG
WA97001	CGATTTTAAT	AGCTTTGATA	GAGTGATGGC	TACAGTACAA	GGACATCGCT	TTCCTCCTGG

	370	380	390	400	410	420
Identity						
AR39	AGGAATCCAA	AATGAAGAAG	ACCTTCTTCT	CATTTTCAAT	AACTATCTCC	AGCAATGTCT
CWL029	AGGAATCCAA	AATGAAGAAG	ACCTTCTTCT	CATTTTCAAT	AACTATCTCC	AGCAATGTCT
J138	AGGAATCCAA	AATGAAGAAG	ACCTTCTTCT	CATTTTCAAT	AACTATCTCC	AGCAATGTCT
TW183	AGGAATCCAA	AATGAAGAAG	ACCTTCTTCT	CATTTTCAAT	AACTATCTCC	AGCAATGTCT
TOR1	AGGAATCCAA	AATGAAGAAG	ACCTTCTTCT	CATTTTCAAT	AACTATCTCC	AGCAATGTCT
WA97001	AGGAATCCAA	AATGAAGAAG	ACCTTCTTCT	CATTTTCAAT	AACTATCTCC	AGCAATGTCT







	430	440	450	460	470	480
Identity						
AR39	GGACGATACT	ATCGTGTATA	CTGAAGTACA	ACAAAATATC	CGCCTTGCCC	ATGTTTTGTA
CWL029	GGACGATACT	ATCGTGTATA	CTGAAGTACA	ACAAAATATC	CGCCTTGCCC	ATGTTTTGTA
J138	GGACGATACT	ATCGTGTATA	CTGAAGTACA	ACAAAATATC	CGCCTTGCCC	ATGTTTTGTA
TW183	GGACGATACT	ATCGTGTATA	CTGAAGTACA	ACAAAATATC	CGCCTTGCCC	ATGTTTTGTA
TOR1	GGACGATACT	ATCGTGTATA	CTGAAGTACA	ACAAAATATC	CGCCTTGCCC	ATGTTTTGTA
WA97001	GGACGATACT	ATCGTGTATA	CTGAAGTACA	ACAAAATATC	CGCCTTGCCC	ATGTTTTGTA







	490	500	510	520	530	540
Identity						
AR39	TCCTTCATTA	CCTGAAAAGC	ACGCGCGTAT	GAAGTTTTTAT	CAAATCTTGT	ATCGTGCTTC
CWL029	TCCTTCATTA	CCTGAAAAGC	ACGCGCGTAT	GAAGTTTTTAT	CAAATCTTGT	ATCGTGCTTC
J138	TCCTTCATTA	CCTGAAAAGC	ACGCGCGTAT	GAAGTTTTTAT	CAAATCTTGT	ATCGTGCTTC
TW183	TCCTTCATTA	CCTGAAAAGC	ACGCGCGTAT	GAAGTTTTTAT	CAAATCTTGT	ATCGTGCTTC
TOR1	TCCTTCATTA	CCTGAAAAGC	ACGCGCGTAT	GAAGTTTTTAT	CAAATCTTGT	ATCGTGCTTC
WA97001	TCCTTCATTA	CCTGAAAAGC	ACGCGCGTAT	GAAGTTTTTAT	CAAATCTTGT	ATCGTGCTTC






	550	560	570	580	590	600
Identity						
AR39	GCAAACGTTT	TCAAACACG	GGATTACTTT	ACGATTTTTTA	AACTGCTTCA	ATAAAACATT
CWL029	GCAAACGTTT	TCAAACACG	GGATTACTTT	ACGATTTTTTA	AACTGCTTCA	ATAAAACATT
J138	GCAAACGTTT	TCAAACACG	GGATTACTTT	ACGATTTTTTA	AACTGCTTCA	ATAAAACATT
TW183	GCAAACGTTT	TCAAACACG	GGATTACTTT	ACGATTTTTTA	AACTGCTTCA	ATAAAACATT
TOR1	GCAAACGTTT	TCAAACACG	GGATTACTTT	ACGATTTTTTA	AACTGCTTCA	ATAAAACATT
WA97001	GCAAACGTTT	TCAAACACG	GGATTACTTT	ACGATTTTTTA	AACTGCTTCA	ATAAAACATT

	610	620	630	640	650	660
Identity						
AR39	TGCTCCACAA	ATAAACACAC	AAGAACCTGC	CCAAGAAGCT	GTTCAATGGC	TCCAAGAGGT
CWL029	TGCTCCACAA	ATAAACACAC	AAGAACCTGC	CCAAGAAGCT	GTTCAATGGC	TCCAAGAGGT
J138	TGCTCCACAA	ATAAACACAC	AAGAACCTGC	CCAAGAAGCT	GTTCAATGGC	TCCAAGAGGT
TW183	TGCTCCACAA	ATAAACACAC	AAGAACCTGC	CCAAGAAGCT	GTTCAATGGC	TCCAAGAGGT
TOR1	TGCTCCACAA	ATAAACACAC	AAGAACCTGC	CCAAGAAGCT	GTTCAATGGC	TCCAAGAGGT
WA97001	TGCTCCACAA	ATAAACACAC	AAGAACCTGC	CCAAGAAGCT	GTTCAATGGC	TCCAAGAGGT

	670	680	690	700	710	720
Identity						
AR39	TGATTCTACA	TTTCCTGGTC	TATTTGTAGG	GATACAATCC	GCAGGATCAG	AATCTGCGCC
CWL029	TGATTCTACA	TTTCCTGGTC	TATTTGTAGG	GATACAATCC	GCAGGATCAG	AATCTGCGCC
J138	TGATTCTACA	TTTCCTGGTC	TATTTGTAGG	GATACAATCC	GCAGGATCAG	AATCTGCGCC
TW183	TGATTCTACA	TTTCCTGGTC	TATTTGTAGG	GATACAATCC	GCAGGATCAG	AATCTGCGCC
TOR1	TGATTCTACA	TTTCCTGGTC	TATTTGTAGG	GATACAATCC	GCAGGATCAG	AATCTGCGCC
WA97001	TGATTCTACA	TTTCCTGGTC	TATTTGTAGG	GATACAATCC	GCAGGATCAG	AATCTGCGCC

	730	740	750	760	770	780
Identity						
AR39	CGGAGCCTGT	CCTAAGCGAT	TAGCTTCTGG	ATATAGAAAT	GCTTATGACT	CAGGGTTTGG
CWL029	CGGAGCCTGT	CCTAAGCGAT	TAGCTTCTGG	ATATAGAAAT	GCTTATGACT	CAGGGTTTGG
J138	CGGAGCCTGT	CCTAAGCGAT	TAGCTTCTGG	ATATAGAAAT	GCTTATGACT	CAGGGTTTGG
TW183	CGGAGCCTGT	CCTAAGCGAT	TAGCTTCTGG	ATATAGAAAT	GCTTATGACT	CAGGGTTTGG
TOR1	CGGAGCCTGT	CCTAAGCGAT	TAGCTTCTGG	ATATAGAAAT	GCTTATGACT	CAGGGTTTGG
WA97001	CGGAGCCTGT	CCTAAGCGAT	TAGCTTCTGG	ATATAGAAAT	GCTTATGACT	CAGGGTTTGG

	790	800	810	820	830	840
Identity						
AR39	TTGTGAAGCT	CATGCTGGAG	AAGGCATAGA	GACCCGGACT	ATTTTTTTCGT	CAGCTAAGGT
CWL029	TTGTGAAGCT	CATGCTGGAG	AAGGCATAGA	GACCCGGACT	ATTTTTTTCGT	CAGCTAAGGT
J138	TTGTGAAGCT	CATGCTGGAG	AAGGCATAGA	GACCCGGACT	ATTTTTTTCGT	CAGCTAAGGT
TW183	TTGTGAAGCT	CATGCTGGAG	AAGGCATAGA	GACCCGGACT	ATTTTTTTCGT	CAGCTAAGGT
TOR1	TTGTGAAGCT	CATGCTGGAG	AAGGCATAGA	GACCCGGACT	ATTTTTTTCGT	CAGCTAAGGT
WA97001	TTGTGAAGCT	CATGCTGGAG	AAGGCATAGA	GACCCGGACT	ATTTTTTTCGT	CAGCTAAGGT

	850	860	870	880	882
Identity					
AR39	AAATCCAGAG	GGATTGATCG	AGATAACCCG	AGTGACTTTC	TC
CWL029	AAATCCAGAG	GGATTGATCG	AGATAACCCG	AGTGACTTTC	TC
J138	AAATCCAGAG	GGATTGATCG	AGATAACCCG	AGTGACTTTC	TC
TW183	AAATCCAGAG	GGATTGATCG	AGATAACCCG	AGTGACTTTC	TC
TOR1	AAATCCAGAG	GGATTGATCG	AGATAACCCG	AGTGACTTTC	TC
WA97001	AAATCCAGAG	GGATTGATCG	AGATAACCCG	AGTGACTTTC	TC

