

S2 Table. Multiple sequence alignment of PB2 mRNA fragments from known avian H5N1 influenza A viruses. All sequences were obtained from NCBI's Influenza Virus Resource (<http://www.ncbi.nlm.nih.gov/genomes/FLU/FLU.html>).

	224	235	240	254	1941	1956	1961	1969
	*	*	*	*	*	*	*	*
CY111595	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
DQ840518	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
EU443540	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
DQ320823	5'-. . . TGATCCCTGAACGGAATGAACAAGGGCACAAC	---	GAATGTGAGAGGTTCAAGGAATGAGAATAC	. . . -3'				
DQ992710	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
CY036122	5'-. . . TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGGATAC	. . . -3'				
FJ010991	5'-. . . TGATTCCTGAGAGAAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
DQ997331	5'-. . . TGGTTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGGATGAGAATAC	. . . -3'				
EU088590	5'-. . . TGATTCCTGAAAGAAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
FJ010983	5'-. . . TGATTCCTGAGAGAAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
FJ010997	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
DQ320815	5'-. . . TGATCCCTGAACGGAATGAACAAGGGCACAAC	---	GAATGTGAGAGGTTCAAGGAATGAGAATAC	. . . -3'				
CY036114	5'-. . . TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
AY770993	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
CY029011	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
EU889040	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
EU889046	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTTAGAGGCTCAGGAATGAGAATAC	. . . -3'				
EU889037	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
EU889038	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
EU889036	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
EU889045	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTTAGAGGCTCAGGAATGAGAATAC	. . . -3'				
EU889044	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
EU889035	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
EU889039	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
EU889041	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
EU889042	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
DQ992673	5'-. . . TGGTTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
DQ822557	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
DQ822558	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
DQ822559	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
JQ936692	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAACGTGAGGGGCTCAGGAATGAGAATAC	. . . -3'				
FJ864697	5'-. . . TGATCCCTGAAAGAAATGAGCAGGGTCAGAC	---	GAACGTGAGGGGTTCAAGGAATGAGAATAC	. . . -3'				
FJ864698	5'-. . . TGATCCCTGAAAGAAATGAGCAGGGTCAGAC	---	GAACGTGAGGGGTTCAAGGAATGAGAATAC	. . . -3'				
CY029340	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
KF597834	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
DQ100543	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
DQ100545	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
DQ100544	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
DQ100542	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
EU088598	5'-. . . TGGTTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
CY029081	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
CY036130	5'-. . . TGGTTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
CY036138	5'-. . . TGGTTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
CY029137	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
DQ320819	5'-. . . TGATCCCTGAACGGAATGAACAAGGGCACAAC	---	GAATGTGAGAGGTTCAAGGAATGAGAATAC	. . . -3'				
CY029074	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCACAAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
DQ992637	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
CY036106	5'-. . . TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGGATAC	. . . -3'				
CY029067	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCACAAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
CY029221	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
CY029396	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
DQ520852	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
JN588935	5'-. . . TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
CY028997	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
CY029165	5'-. . . TGATCCCTGAACGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGTTCAAGGAATGAGAATAC	. . . -3'				
CY029046	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCACAAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
DQ992697	5'-. . . TGATCCCTGAAAGAAATGAGCAGGGTCAAAC	---	GAACGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
HQ200551	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
HQ200530	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
JQ936716	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAACGTGAGGGGCTCAGGAATGAGAATAC	. . . -3'				
JQ936724	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	. . . -3'				
EU620659	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGATCAGGAATGAGAATAC	. . . -3'				
EU620667	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGATCAGGAATGAGAATAC	. . . -3'				

	224	235	240	254	1941	1956	1961	1969
	*	*	*	*	*	*	*	*
DQ992677	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
HM172426	5'	...	TGATTCCTGAAAGGAATGAACAGGGCAGAC	---	GAATGTTAGAGGCTCAGGAATGAGAATAC	...	-3'	
CY029732	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGGATAC	...	-3'	
AY585511	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
CY048176	5'	...	TGATTCCTGAAAGGAATGAACAGGGCAGAC	---	GAATGTGAGAGGCTCCGGAATGAGAATAC	...	-3'	
DQ992678	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
DQ992700	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
HM172416	5'	...	TGATTCCTGAAAGGAATGAACAGGGCAAAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
GQ122508	5'	...	TGATTCCTGAAAGGAATGAACAGGGCAGAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
GQ122466	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
GQ122472	5'	...	TGATTCCTGAAAGGAATGAACAGGGCAGAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
DQ992574	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
DQ992680	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
GQ122484	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
GQ122490	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
GQ122478	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
HM172431	5'	...	TGGTTCCTGAAAGGAATGAACAGGGCAAAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
CY029620	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTAAGAGGCTCAGGAATGAGAATAC	...	-3'	
DQ320869	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
CY041027	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGGATGAGAATAC	...	-3'	
JX420211	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
HM172434	5'	...	TGGTTCCTGAAAGGAATGAACAGGGCAAAC	---	GAATGTGAAAGGCTCAGGAATGAGAATAC	...	-3'	
DQ992635	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATATGAGAGGCTCAGGAATGAGAATAC	...	-3'	
DQ492826	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
CY036242	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
CY029564	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
DQ320867	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
CY061291	5'	...	TGATTCCTGAAAGGAATGAACAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
CY090113	5'	...	TGATTCCTGAAAGGAATGAACAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
JQ936700	5'	...	TGATTCAGAAAGGAATGAACAAGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
DQ492819	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
GU182147	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTAAGAGGCTCAGGAATGAGAATAC	...	-3'	
DQ992676	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
CY029025	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
CY041019	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGGATGAGAATAC	...	-3'	
CY126017	5'	...	TGATTCCTGAAAGAAATGAACAGGCAGAC	---	GAATGTTAGAGGCTCAGGGATGAGAATAC	...	-3'	
CY048160	5'	...	TGATTCCTGAAAGAAATGAACAGGCAGAC	---	GAATGTGAGAGGCTCCGGAATGAGAATAC	...	-3'	
HM172433	5'	...	TGGTTCCTGAAAGGAATGAACAGGGCAAAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
DQ492842	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
CY041305	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTTAGAGGCTCAGGAATGAGAATAC	...	-3'	
DQ992675	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
JX420219	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
CY036194	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
DQ492834	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
HM172407	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGGATAA	...	-3'	
FJ784827	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
CY041011	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGGATGAGAATAC	...	-3'	
CY041003	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGGATGAGAATAC	...	-3'	
AB499529	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGGATGAGAATAC	...	-3'	
FR687273	5'	...	TGATTCCTGAAAGAAATGAACAAGGCAGAC	---	GAATGTTAGAGGCTCAGGAATGAGAATAC	...	-3'	
HM172420	5'	...	TGGTTCCTGAAAGGAATGAACAGGGCAAAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
JQ936684	5'	...	TGATTCAGAAAGGAATGAACAAGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
KC261448	5'	...	TGATTCAGAAAGGAATGAACAAGGGCAGAC	---	GAATGTAAGAGGCTCAGGAATGAGAATAC	...	-3'	
DQ492827	5'	...	TGATTCCTGAAAGGAATGAACAGGGGCAGAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
CY030520	5'	...	TGATACCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
DQ492825	5'	...	TGATTCCTGAAAGGAATGAACAAGGGGCAGAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
DQ492840	5'	...	TGATTCCTGAAAGGAATGAACAAGGGGCAGAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
DQ320866	5'	...	TGATTCCTGAAAGGAATGAACAAGGGGCAGAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	
FR687274	5'	...	TGATTCCTGAAAGAAATGAACAAGGCAGAC	---	GAATGTTAGAGGCTCAGGAATGAGAATAC	...	-3'	
CY040987	5'	...	TGATTCCTGAAAGGAATGAACAAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGGATGAGAATAC	...	-3'	
FJ784829	5'	...	TGATTCCTGAAAGGAATGAACAAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
GQ412036	5'	...	TGATTCCTGAAAGGAATGAACAAGGGGCAGAC	---	GAATGTAAGAGGCTCAGGAATGAGAATAC	...	-3'	
GQ412035	5'	...	TGATTCCTGAAAGGAATGAACAAGGGGCAGAC	---	GAATGTAAGAGGCTCAGGAATGAGAATAC	...	-3'	
KJ028471	5'	...	TGATTCCTGAAAGGAATGAACAAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
CY036226	5'	...	TGATTCCTGAAAGGAATGAACAAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
GQ412037	5'	...	TGATTCCTGAAAGGAATGAACAAGGGGCAGAC	---	GAATGTAAGAGGCTCAGGAATGAGAATAC	...	-3'	
CY036218	5'	...	TGATTCCTGAAAGGAATGAACAAGGGGCAGAC	---	GAATGTGAGAGGCTCAGGAATGAGAATAC	...	-3'	
GQ412033	5'	...	TGATTCCTGAAAGGAATGAACAAGGGGCAGAC	---	GAATGTAAGAGGCTCAGGAATGAGAATAC	...	-3'	
HM172424	5'	...	TGATTCCTGAAAGGAATGAACAAGGCAGAC	---	GAATGTTAGAGGCTCAGGAATGAGAATAC	...	-3'	
DQ492843	5'	...	TGATTCCTGAAAGGAATGAACAAGGGCAAAC	---	GAATGTGAGAGGCTCTGGAATGAGAATAC	...	-3'	

	224	235	240	254	1941	1956	1961	1969
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JN646692	5'	...	TGATCCCTGAACGAAATGAACAGGGACAGAC	---	GAACGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
DQ992569	5'	...	TGATCCCTGAACGAAATGAACAGGGACAAAC	---	GAATGTGAGAGGTTTCAGGAAT	GAGAATAC	...	-3'
JN646697	5'	...	TGATCCCTGAACGAAATGAACAGGGGCAGAC	---	GAACGTGAGAGGTTTCAGGAAT	GAGAATAC	...	-3'
DQ073399	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAT	---	GAATGTAAGAGGGTCAGGGAT	GAGAATAC	...	-3'
DQ073400	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGGGGCTCAGGAAT	GAGAATAC	...	-3'
FJ784826	5'	...	TGATCCCTGAAAGAAATGAGCAAGGTCAGAC	---	GAACGTAAGAGGGCTCAGGAAT	GAGAATAC	...	-3'
DQ073401	5'	...	TGATCCCTGAAAGAAATGAGCAAGGTCAAAC	---	GAATGTGAGGGGCTCAGGAAT	GAGAATAC	...	-3'
FJ784833	5'	...	TGATCCCTGAAAGAAATGAGCAAGGTCAGAC	---	AAACGTGAGGGGTTTCAGGAAT	GAGAATAC	...	-3'
FJ784838	5'	...	TGATCCCTGAAAGAAATGAGCAAGGTCAGAC	---	GAACGTGAGGGGTTTCAGGAAT	GAGAATAC	...	-3'
KC815848	5'	...	TGATCCCTGAAAGGAATGAACAAGGTCAAAC	---	AAACGTGAGGGGTTTCAGGAAT	GAGGATAC	...	-3'
KC815856	5'	...	TGATCCCTGAAAGGAATGAACAAGGTCAAAC	---	AAACGTGAGGGGTTTCAGGAAT	GAGGATAC	...	-3'
KC815872	5'	...	TGATCCCTGAAAGGAATGAACAAGGTCAAAC	---	AAACGTGAGGGGTTTCAGGAAT	GAGGATAC	...	-3'
GU220792	5'	...	TGATCCCTGAAAGAAATGAGCAAGGTCAGAC	---	GAACGTGAGGGGTTTCAGGAAT	GAGAATAC	...	-3'
FJ784837	5'	...	TGATCCCTGAAAGAAATGAGCAAGGTCAGAC	---	GAACGTGAGGGGTTTCAGGAAT	GAGAATAC	...	-3'
FJ784825	5'	...	TGATCCCTGAAAGAAATGAGCAAGGTCAGAC	---	GAACGTGAGGGGTTTCAGGAAT	GAGAATAC	...	-3'
DQ992684	5'	...	TGATCCCTGAAAGAAATGAGCAAGGTCAAAC	---	GAACGTGAGGGGCTCAGGAAT	GAGAATAC	...	-3'
FJ784836	5'	...	TGATCCCTGAAAGAAATGAGCAAGGTCAGAC	---	GAACGTGAGGGGTTTCAGGAAT	GAGAATAC	...	-3'
FJ784835	5'	...	TGATCCCTGAAAGAAATGAGCAAGGTCAGAC	---	GAACGTGAGGGGTTTCAGGAAT	GAGAATAC	...	-3'
CY046179	5'	...	TGATCCCTGAAAGAAATGAGCAAGGTCAGAC	---	GAACGTGAGGGGTTTCAGGAAT	GAGAATAC	...	-3'
FJ784830	5'	...	TGATCCCTGAAAGAAATGAGCAAGGTCAGAC	---	GAACGTGAGGGGTTTCAGGAAT	GAGAATAC	...	-3'
FJ784828	5'	...	TGATCCCTGAAAGAAATGAGCAAGGTCAGAC	---	GAACGTGAGGGGTTTCAGGAAT	GAGAATAC	...	-3'
AB212277	5'	...	TAATCCCTGAAAGAAATGAGCAAGGTCAGAC	---	GAACGTGAGGGGCTCAGGAAT	GAGAATAC	...	-3'
KC815864	5'	...	TGATCCCTGAAAGGAATGAACAAGGTCAAAC	---	AAACGTGAGGGGTTTCAGGAAT	GAGAATAC	...	-3'
EU195389	5'	...	TGATCCCGAAAGAAATGAGCAAGGTCAAAC	---	GAACGTGAGGGGTTTCAGGAAT	GAGAATAC	...	-3'
CY040971	5'	...	TGATCCCGAAAGAAATGAGCAAGGTCAGAC	---	GAACGTGAGGGGTTTCAGGAAT	GAGAATAC	...	-3'
CY040923	5'	...	TGATCCCGAAAGAAATGAGCAAGGTCAGAC	---	GAACGTGAGGGGTTTCAGGAAT	GAGAATAC	...	-3'
CY030998	5'	...	TGATCCCTGAAAGAAATGAGCAAGGTCAAAC	---	GAACGTGAGGGGTTTCAGGAAT	GAGAATAC	...	-3'
JF758818	5'	...	TGATCCCTGARAGRAATGARCARGGACAAAC	---	GAATGTAAGGGGATCAGGAAT	GAGAATAC	...	-3'
JF758815	5'	...	TGATCCCTGAAAGAAATGAACAGGGACAAAC	---	GAATGTAAGGGGATCAGGAAT	GAGAATAC	...	-3'
CY036702	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
EU148387	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY094806	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
DQ990000	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
EU616866	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY045406	5'	...	TGATCCCTGAAAGAAATGAACAGGGACAAAC	---	GAATGTAAGGGGATCAGGAAT	GAGAATAC	...	-3'
CY033176	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY034205	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY020644	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY017034	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY036718	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
EU148451	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY016834	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY016874	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY017058	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY043935	5'	...	TGATCCCTGAAAGAAATGAACAGGGACAAAC	---	GAATGTAAGGGGATCAGGAAT	GAGAATAC	...	-3'
CY031179	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
EF112210	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
AY038798	5'	...	TGATCCCTGAAAGGAATGAACAAGGGACAAAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
HM627910	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
AB593444	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGGATAC	...	-3'
CY016946	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
EU148403	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
EF112213	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY020668	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTTAGAGGCTCAGGAAT	GAGAATAC	...	-3'
EF112218	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
EF112206	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY016954	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY029944	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY028723	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY036710	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
JQ714224	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
JQ714232	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY053332	5'	...	TGATCCCTGAAAGAAATGAACAGGGACAAAC	---	GAATGTAAGGGGATCAGGAAT	GAGAATAC	...	-3'
AY651728	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY020356	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTTAGAGGCTCAGGAAT	GAGAATAC	...	-3'
DQ323675	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTTAGAGGCTCAGGAAT	GAGAATAC	...	-3'
EU148395	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
DQ989984	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
EF112221	5'	...	TGATCCCTGAAAGGAATGAACAAGGGCAGAC	---	GAATGTGAGAGGCTCAGGAAT	GAGAATAC	...	-3'
CY053884	5'	...	TGATCCCTGAAAGAAATGAACAGGGACAAAC	---	GAATGTAAGGGGATCAGGAAT	GAGAATAC	...	-3'

	224	235	240	254	1941	1956	1961	1969
	*	*	*	*	*	*	*	*
CY092115	5'-. . . TGATTCCTGAAAGGAATGAACATGGGCAGAC				---	GAATGTGAGAGGCTCAGGAATGAGAATAC		...-3'
JX534586	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC				---	GAATGTGAGGGGATCAGGAATGAGAATAT		...-3'
CY092127	5'-. . . TGATTCCTGAAAGGAATGAACATGGGCAGAC				---	GAATGTGAGAGGCTCAGGAATGAGAATAC		...-3'
KF881593	5'-. . . TGATCCCTGAAAGAAATGAACAAGGACAGAC				---	GAATGTTAGAGGCTCAGGAATGAGAATAC		...-3'
KF881564	5'-. . . TGATCCCTGAAAGAAATGAACAAGGACAGAC				---	GAATGTTAGAGGCTCAGGAATGAGAATAC		...-3'
KF881346	5'-. . . TGATCCCTGAAAGAAATGAACAAGGACAGAC				---	GAATGTTAGAGGCTCAGGAATGAGAATAC		...-3'
KF881667	5'-. . . TGATCCCTGAAAGAAATGAACAAGGACAGAC				---	GAATGTTAGAGGTT CAGGAATGAGAATAC		...-3'
DQ997354	5'-. . . TGGTTCCTGAAAGGAATGAACAAGGGCAGAT				---	GAATGTGAGAGGCTCAGGAATGAGAATAC		...-3'
KF881622	5'-. . . TGATCCCTGAAAGAAATGAACAAGGACAGAC				---	GAATGTTAGAGGTT CAGGAATGAGAATAC		...-3'
KF881324	5'-. . . TGATCCCTGAAAGAAATGAACAAGGACAGAC				---	GAATGTTAGAGGCTCAGGAATGAGAATAC		...-3'
DQ997142	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC				---	GAATGTGAGAGGCTCAGGAATGAGAATAC		...-3'
KF881317	5'-. . . TGATCCCTGAAAGAAATGAACAAGGACAGAC				---	GAATGTTAGAGGCTCAGGAATGAGAATAC		...-3'
KF881701	5'-. . . TGATCCCTGAAAGAAATGAACAAGGACAGAC				---	GAATGTTAGAGGCTCAGGAATGAGAATAC		...-3'
DQ997225	5'-. . . TGGTTCCTGAAAGGAATGAACAAGGGCAGAC				---	GAATGTGAGAGGCTCAGGAATGAGAATAC		...-3'
AY950280	5'-. . . TGGTTCCTGAAAGGAATGAACAAGGGCAGAC				---	GAATGTGAGAGGCTCAGGAATGAGAATAC		...-3'
GU727666	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC				---	GAATGTGAGAGGCTCGGGAATGAGAATAC		...-3'
JX534546	5'-. . . TGGTTCCTGAGAGAAATGAACAAGGGCAAAC				---	GAATGTGAGAGGCTCAGGAATGAGAATAC		...-3'
GU727674	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC				---	GAATGTGAGAGGCTCGGGAATGAGAATAC		...-3'
DQ997149	5'-. . . TGATTCCTGAAAGGAATGAGCAAGGGCAGAC				---	GAATGTGAGAGGATCAGGAATGAGAATAC		...-3'
FR687271	5'-. . . TGATTCCTGAAAGAAATGAACAAGGACAGAC				---	GAATGTGAGGGGATCAGGAATGAGAATAC		...-3'
JX534562	5'-. . . TGATTCCTGAAAGAAATGAACAAGGCAGAC				---	GAATGTGAGAGGCTCGGGAATGAGAATAC		...-3'
AF144300	5'-. . . TGATTCCTGAAAGGAATGAGCAAGGCAAAC				---	GAATGTGAGAGGCTCAGGAATGAGAATAC		...-3'
EU263350	5'-. . . TGATTCCTGAAAGGAATGAGCAAGGGCAGAC				---	GAATGTGAGAGGCTCAGGAATGAGAATAC		...-3'
EU263342	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAAAC				---	GAATGTGAGAGGCTCAGGAATGAGAATAC		...-3'
DQ366311	5'-. . . TGATCCCTGAAAGGAATGAGCAAGGTCAAAC				---	GAATGTGAGGGGATCAGGAATGAGAATAC		...-3'
CY015088	5'-. . . TGATTCCTGAAAGAAATGAACAAGGGCAGGC				---	GAATGTAAGAGGCTCAGGAATGAGAATAC		...-3'
DQ997101	5'-. . . TGATTCCTGAAAGGAATGAGCAAGGGCAGAC				---	GAATGTGAGGGGCTCAGGGATGAGAATAC		...-3'
DQ997121	5'-. . . TGATTCCTGAAAGAAATGAACAAGGGCAGAC				---	GAATGTAAGAGGTCAGGGATGAGAATAC		...-3'
EU871817	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAAAC				---	GAATGTAAGAGGATCAGGAATGAGGATAC		...-3'
FR687270	5'-. . . TGATTCCTGAAAGAAATGAACAAGGACAAAC				---	GAATGTGAGAGGATCAGGATTGAGGATAC		...-3'
DQ366335	5'-. . . TGATCCCTGAACGGAATGAACAAGGGACAGAC				---	AAATGTGAGAGGTT CAGGAATGAGAATAC		...-3'
DQ366327	5'-. . . TGATCCCTGAACGGAATGAACAAGGGACAGAC				---	AAATGTGAGAGGTT CAGGAATGAGAATAC		...-3'
DQ997110	5'-. . . TGATCCCTGAAAGAAATGAACAAGGTCAAAC				---	GAATGTGAGGGGCTCAGGAATGAGAATAC		...-3'
DQ997132	5'-. . . TGATCCCTGAAAGAAATGAGCAAGGTCAAAC				---	GAATGTGAGGGGCTCAGGAATGAGAATAC		...-3'
DQ366303	5'-. . . TGATCCCTGAAAGGAATGAGCAAGGTCAAAC				---	GAATGTGAGGGGATCAGGAATGAGAATAC		...-3'
DQ366319	5'-. . . TGATCCCTGAAAGGAATGAGCAAGGTCAAAC				---	GAATGTGAGGGGATCAGGAATGAGAATAC		...-3'
DQ454106	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC				---	GAATGTGAGAGGATCAGGAATGAGAATAC		...-3'
CY061882	5'-. . . TGATCCCTGAAAGAAATGAGCAAGGTCAGAC				---	GAACGTAAGGGGTT CAGGAATGAGAATAC		...-3'
CY015126	5'-. . . TGATCCCTGAAAGAAATGAGCAAGGTCAAAC				---	GAACGTGAGGGGTT CAGGAATGAGAATAC		...-3'
GU596981	5'-. . . TGGTCCCGGAAAGGAATGAGCAAGGTCAGAC				---	GAACGTGAGGGGTT CAGGAATGAGAATAC		...-3'
FJ031998	5'-. . . TGATTCCTGAAAGAAATGAACAAGGGCAAAC				---	GAATGTAAGGGGATCAGGAATGAGAATAC		...-3'
CY014732	5'-. . . TGATTCCTGAGAGGAATGAACAAGGACAAAC				---	GAATGTGAGAGGTT CAGGAATGAGGATAC		...-3'
EF392844	5'-. . . TGATTCCTGAAAGAAATGAACAAGGGCAAAC				---	GAATGTAAGGGGATCAGGAATGAGAATAC		...-3'
EF210572	5'-. . . TGATTCCTGAAAGAAATGAACAAGGGCAAAC				---	GAATGTAAGGGGTT CAGGAATGAGAATAC		...-3'
EU871943	5'-. . . TGATTCCTGAAAGGAATGAACAAGGACAGAC				---	GAATGTGAGAGGCTCAGGAATGAGAATAC		...-3'
FJ868022	5'-. . . TGATTCCTGAAAGGAATGAAAAGGGCAGAC				---	GAATGTGAGAGGATCAGGAATGAGAATAC		...-3'
EF112202	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAGAC				---	GAATGTGAGAGGCTCAGGAATGAGAATAC		...-3'
AY856861	5'-. . . TGATTCCTGAAAGGAATGAACAAGGGCAAAC				---	GAATGTGAGAGGCTCAGGATTGAGAATAC		...-3'