

**Table 1.** Reported heamagglutinin proteolytic cleavage site of HA0 protein for H5 and H7 LPAI and HPAI viruses based on deduced amino acid sequence (adapted from refs 8 and 10)

<i>Amino acid sequence</i>	<i>Outbreak</i>	<i>Pathotype</i>	<i>References</i>
<b>H5 avian influenza viruses<sup>1</sup></b>			
PQ.....RETR*GLF	Typical H5 LPAI	LP	(10)
PQ.....RKKR*GLF	Scotland/1959, Texas-USA/2004	HP	(6)
PQ.... <u>RR</u> RKKR*GLF	Ontario-Canada/1966, Italy/1997	HP	(6)
PQ.... <u>R</u> KRKKR*GLF	Ireland/1983	HP	(6)
PQ <u>REKR</u> RKKR*GLF	South Africa/2006, 2006; H5N1 Eurasian-African lineage (1996-)	HP	(1)
PQ <u>RERR</u> RKKR*GLF	H5N1 Eurasian-African lineage (1996-)	HP	(8)
PQ <u>REIR</u> RKKR*GLF		HP	
PQ <u>IERR</u> RKKR*GLF		HP	
PQ <u>GERR</u> RKKR*GLF		HP	
PL <u>RERR</u> ..KR*GLF		HP	
P <u>RIERR</u> RKKR*GLF		HP	
PQ <u>RERIR</u> KKR*GLF		HP	
PQ <u>RE</u> .RRKKR*GLF		HP	
PQ <u>KERR</u> RKKR*GLF		HP	
PQ <u>RERK</u> RKKR*GLF		HP	
PQ <u>RESR</u> RKKR*GLF		HP	
PQ <u>RE</u> ..KRKKR*GLF		HP	
PL <u>RE</u> ..RRKKR*GLF		HP	
PQ <u>GDRR</u> RKKR*GLF		HP	
PQ <u>GEGR</u> RKKR*GLF		HP	
PQ.... <u>R</u> KRKT <small>R</small> *GLF	England/1991	HP	(10)
PQ.... <u>R</u> KRKT <small>R</small> *GLF	Mexico/1994-95	HP	(4, 5)
PQ <u>RKR</u> KRKT <small>R</small> *GLF			
PQ <u>RETR</u> QKR*GLF	South Africa/1961	HP	(10)
PQ.....KKKR*GLF <sup>2</sup>	Pennsylvania-USA/1983	HP	(10)
<b>H7 avian influenza viruses</b>			
PEIP.....KTR*GLF	Typical H7 LPAI	LP	(10)
PEIP.....KGR*GLF			
PEKP.....KTR*GLF			
PENP.....KTR*GLF			
PEIP..... <u>KKRE</u> KR*GLF	England/1963, Victoria-Australia/1975, Victoria-Australia/1985	HP	(10)
PEIP..... <u>KKR</u> KR*GLF	England/1979	HP	(1, 14)
PEIP..... <u>R</u> KRKR*GLF	Queensland-Australia/1994, New South Wales-Australia/1997	HP	(11)
PETP..... <u>KR</u> KRKR*GLF	Pakistan/1995	HP	(2)
PETP..... <u>KRR</u> KR*GLF			
PETP..... <u>KRRN</u> R*GLF			

<b>Amino acid sequence</b>	<b>Outbreak</b>	<b>Pathotype</b>	<b>References</b>
PETP..... <u>KRRRR</u> *GLF	England/1963	HP	(14)
PEIP..... <u>KRRRR</u> *GLF	England/1979, Netherlands/2003		(1, 14)
PEIP..... <u>KKKKR</u> *GLF	Leipzig-Germany/1979, Victory-	HP	(9)
PEIP..... <u>KRKKR</u> *GLF	Australia/1992		
PEIP..... <u>KKRKKR</u> *GLF			
PEIP..... <u>KKKKKKR</u> *GLF			
PEIPKG..... <u>SRVRR</u> *GLF	Italy/1999	HP	(3)
PEIPKG..... <u>SRMRR</u> *GLF			
PEIPKR..... <u>SRVRR</u> *GLF			
PEKPKT <u>CSPLSRCRETR</u> *GLF	Chile/2002	HP	(12)
PEKPKT <u>CSPLSRCRKT</u> *GLF			
PENPK..... <u>QAYRKR</u> MTR*GLF	British Columbia-Canada/2004	HP	(7)
PENPK..... <u>QAYQKR</u> MTR*GLF			
PENPK..... <u>QAYKKR</u> MTR*GLF			
PENPK..... <u>QAYHKR</u> MTR*GLF			
PENPK..... <u>QAHQKR</u> MTR*GLF			
PENPR..... <u>QAYRKR</u> MTR*GLF			
PENPK..... <u>QACQKR</u> MTR*GLF			
PEIPK..... <u>GRHRRPKR</u> *GLF	North Korea/2005	HP	(13)

<sup>1</sup>\* = site of HA0 cleavage into HA1 and HA2, underlined amino acids are inserts

<sup>2</sup>High pathogenicity phenotype also required loss of the shielding glycosylation site at residue 13

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