_		
П	\sim	ma
ш	LU	20

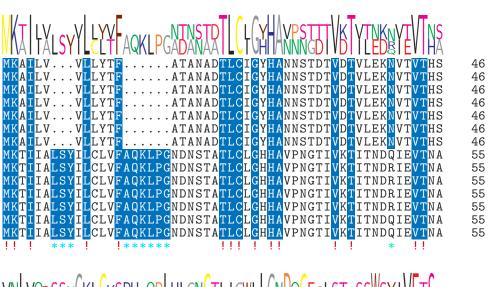
```
AIU46631.1 hemagglutinin Influenza A virus (A/Harda/1718/2012(H1N1))
AFL56683.1 hemagglutinin Influenza A virus
                                           (A/Moscow/IIV-45/2012(H1N1))
AIU46632.1 hemagglutinin Influenza A virus (A/Jabalpur/1737/2012(H1N1))
AGV74339.1 hemagglutinin Influenza A virus
                                           (A/Ontario/004/2012(H1N1))
AGV74337.1 hemagglutinin Influenza A virus (A/Ontario/024/2012(H1N1))
AGV74326.1 hemagglutinin Influenza A virus
                                           (A/Ontario/006/2012(H1N1))
AGV74328.1 hemagglutinin Influenza A virus
                                           (A/Ontario/008/2012(H1N1))
AGV74313.1 hemagglutinin Influenza A virus
                                           (A/Ontario/009/2012(H3N2))
AIE52965.1 hemagglutinin Influenza A virus (A/Santiago/p37d0/2012(H3N2))
AIE53844.1 hemagglutinin Influenza A virus (A/Santiago/p2d1/2012(H3N2))
AIE53558.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2))
AIE53547.1 hemagglutinin Influenza A virus (A/Santiago/p24d2/2012(H3N2))
AGV74311.1 hemagglutinin Influenza A virus (A/Ontario/001/2012(H3N2))
AIE53000.1 hemagglutinin Influenza A virus (A/Santiago/p38-2012d5/2012(H3))
consensus
```

logo

```
AIU46631.1 hemagglutinin Influenza A virus (A/Harda/1718/2012(H1N1))
AFL56683.1 hemagglutinin Influenza A virus
                                           (A/Moscow/IIV-45/2012(H1N1))
AIU46632.1 hemagglutinin Influenza A virus
                                           (A/Jabalpur/1737/2012(H1N1))
                                           (A/Ontario/004/2012(H1N1))
AGV74339.1 hemagglutinin Influenza A virus
AGV74337.1 hemagglutinin Influenza A virus
                                           (A/Ontario/024/2012(H1N1))
AGV74326.1 hemagglutinin Influenza A virus
                                           (A/Ontario/006/2012(H1N1))
AGV74328.1 hemagglutinin Influenza A virus
                                           (A/Ontario/008/2012(H1N1))
AGV74313.1 hemagglutinin Influenza A virus
                                           (A/Ontario/009/2012(H3N2))
AIE52965.1 hemagglutinin Influenza A virus
                                           (A/Santiago/p37d0/2012(H3N2))
AIE53844.1 hemagglutinin Influenza A virus (A/Santiago/p2d1/2012(H3N2))
AIE53558.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2))
AIE53547.1 hemagglutinin Influenza A virus (A/Santiago/p24d2/2012(H3N2))
AGV74311.1 hemagglutinin Influenza A virus (A/Ontario/001/2012(H3N2))
AIE53000.1 hemagglutinin Influenza A virus (A/Santiago/p38-2012d5/2012(H3))
consensus
```

logo

```
AIU46631.1 hemagglutinin Influenza A virus
                                           (A/Harda/1718/2012(H1N1))
                                           (A/Moscow/IIV-45/2012(H1N1))
AFL56683.1 hemagglutinin Influenza A virus
AIU46632.1 hemagglutinin Influenza A virus
                                           (A/Jabalpur/1737/2012(H1N1))
AGV74339.1 hemagglutinin Influenza A virus
                                           (A/Ontario/004/2012(H1N1))
AGV74337.1 hemagglutinin Influenza A virus
                                           (A/Ontario/024/2012(H1N1))
AGV74326.1 hemagglutinin Influenza A virus
                                           (A/Ontario/006/2012(H1N1))
                                           (A/Ontario/008/2012(H1N1))
AGV74328.1 hemagglutinin Influenza A virus
AGV74313.1 hemagglutinin Influenza A virus
                                           (A/Ontario/009/2012(H3N2))
AIE52965.1 hemagglutinin Influenza A virus
                                           (A/Santiago/p37d0/2012(H3N2))
AIE53844.1 hemagglutinin Influenza A virus
                                           (A/Santiago/p2d1/2012(H3N2))
AIE53558.1 hemagglutinin Influenza A virus
                                           (A/Santiago/p2d2/2012(H3N2))
                                           (A/Santiago/p24d2/2012(H3N2))
AIE53547.1 hemagglutinin Influenza A virus
AGV74311.1 hemagglutinin Influenza A virus (A/Ontario/001/2012(H3N2))
AIE53000.1 hemagglutinin Influenza A virus (A/Santiago/p38-2012d5/2012(H3))
consensus
```



VNLLEDKHNGKLCKLRGVAPLHLGKCNIAGWILGNPECESLSTASSWSYIVETSS VNLLEDKHNGKLCKLRGVAPLHLGKCNIAGWILGNPECESLSTASSWSYIVETSS 101 101 VNLLEDKHNGKLCKLRGVAPLHLGKCNIAGWILGNPECESLSTASSWSYIVETSS VNLLEDKHNGKLCKLRGVAPLHLGKCNIAGWILGNPECETLSTASSWSYIVETSS VNLLEDKHNGKLCKLRGVAPLHLGKCNIAGWILGNPECETLSTASSWSYIVETSS VNLLEDKHNGKLCKLRGVAPLHLGKCNIAGWILGNPECESLSTASSWSYIVETSS VNLLEDKHNGKLCKLRGVAPLHLGKCNIAGWILGNPECESLSTASSWSYIVETSS 101 101 101 101 101 TELVQSSSTGEICNSPH.QILDGENCTLIDALLGDPQCDGFQN.KKWDLFVERS. TELVQNSSIGEICDSPH.QILDGENCTLIDALLGDPQCDGFQN.KKWDLFVERS. TELVQNSSIGEICDSPH.QILDGENCTLIDALLGDPQCDGFQN.KKWDLFVERS. TELVQNSSIGEICDSPH.QILDGENCTLIDALLGDPQCDGFQN.KKWDLFVERS. TELVQNSSIGEICDSPH.QILDGENCTLIDALLGDPQCDGFQN.KKWDLFVERS. 107 107 107 107 107 TELVQSSSTGEICDSPH.QILDGENCTLIDALLGDPQCDGFQN.KKWDLFVERS TELVQNSSTGEICDSPH.QILDGENCTLIDALLGDPQCDGFQN.KKWDLFVERS 107 107

SDNST_VPYDVPDVESLPSQVS\VSTL KAYGN_VPGDFIR AELNELLASSGSFERF_FNESFNIPGHDSNKUTSAACIAA

```
SDNGTCYPGDFINYEELREQLSSVSSFERFEIFPKTSSWPNHDSNKGVTAACPRA
SDNGTCYPGDFINYEELREQLSSVSSFERFEIFPKTSSWPNHDSNKGVTAACPRA
SDNGTCYPGDFINYEELREQLSSVSSFERFEIFPKTSSWPNHDSNKGVTAACPRA
SDNGTCYPGDFIDYEELREQLSSVSSFERFEIFPKTSSWPNHDSNKGVTAACPRA
SDNGTCYPGDFIDYEELREQLSSVSSFERFEIFPKTSSWPNHDSNKGVTAACPHA
SDNGTCYPGDFIDYEELREQLSSVSSFERFEIFPKTSSWPNHDSNKGVTAACPHA
SDNGTCYPGDFIDYEELREQLSSVSSFERFEIFPKTSSWPNHDSNKGVTAACPHA
SDNGTCYPGDFIDYEELREQLSSVSSFERFEIFPKTSSWPNHDPNKGVTAACPHA
KAHSNCYPYDVPDYASLRSLVASSGTL...EFNNESFNWTGV.TQNGTSSACIRR
KAYSNCYPYDVPDYASLRSLVASSGTL...EFNNESFNWTGV.TQNGTSSACIRR
KAYSNCYPYDVPDYASLRSLVASSGTL...EFNNESFNWTGV.TQNGTSSACIRR
KAYSNCYPYDVPDYASLRSLVASSGTL...EFNNESFNWTGV.TQNGTSSACIRR
KAYSNCYPYDVPDYASLRSLVASSGTL...EFNNESFNWTGV.TQNGTSSACIRR
KAYSNCYPYDVPDYASLRSLVASSGTL...EFNNESFNWTGV.TQNGTSSACIRR
KAYSNCYPYDVPDYASLRSLVASSGTL...EFNNESFNWTGV.TQNGTSSACIRR
KAYSNCYPYDVPDYASLRSLVASSGTL...EFNNESFNWTGV.TQNGTSSACIRR
KAYSNCYPYDVPDYASLRSLVASSGTL...EFNNESFNWTGV.TQNGTSSACIRR
```

156

156

156

156

156

156

158

158

158

158

158

158

158

AIU46631.1 hemagglutinin Influenza A virus (A/Harda/1718/2012(H1N1)) AFL56683.1 hemagglutinin Influenza A virus (A/Moscow/IIV-45/2012(H1N1)) AIU46632.1 hemagglutinin Influenza A virus (A/Jabalpur/1737/2012(H1N1)) AGV74339.1 hemagglutinin Influenza A virus (A/Ontario/004/2012(H1N1)) AGV74337.1 hemagglutinin Influenza A virus (A/Ontario/024/2012(H1N1)) AGV74326.1 hemagglutinin Influenza A virus (A/Ontario/006/2012(H1N1)) AGV74328.1 hemagglutinin Influenza A virus (A/Ontario/008/2012(H1N1)) AGV74313.1 hemagglutinin Influenza A virus (A/Ontario/009/2012(H3N2)) AIE53844.1 hemagglutinin Influenza A virus (A/Santiago/p37d0/2012(H3N2)) AIE53558.1 hemagglutinin Influenza A virus (A/Santiago/p2d1/2012(H3N2)) AIE535547.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2)) AGV74311.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2)) AGV74311.1 hemagglutinin Influenza A virus (A/Santiago/p38-2012d5/2012(H3)) consensus	SAKS YSR NWLYKLNSVOK SVTYP DKOKEV YLW V PSTK NOS VCO GNS FKNLIWL VKKGNSYPKLSKSYINDKGKEVLVLWGIHHPSTTADQQSLYQN 21: GAKSFYKNLIWL VKKGNSYPKLSKSYINDKGKEVLVLWGIHHPSTTADQQSLYQN 21: GAKSFYKNLIWL VKKGNSYPKLSKSYINDKGKEVLVLWGIHHPSTTADQQSLYQN 21: GAKGFYKNLIWL VKKGNSYPKLSKSYINDKGKEVLVLWGIHHPSTTADQQSLYQN 21: GAKGFYKNLIWL VKKGNSYPKLSKSYINDKGKEVLVLWGIHHPSTTADQQSLYQN 21: GAKGFYKNLIWL VKKGNSYPKLSKSYINDKGKEVLVLWGIHHPSTTADQQSLYQN 21: GAKGFYKNLIWL VKKGNSYPKLSKSYINDKGKEVLVLWGIHHPSTTADQQSLYQN 21: SNNSFFSRLNWLTHLNFKYPALNVTMPNNEQFDKLYIWGVHHPGTDKDQIFLYAQ 21: SNNSFFSRLNWLTHLNFKYPALNVTMPNNEQFDKLYIWGVHHPGTDKDQIFLYAQ 21: SNNSFFSRLNWLTHLNFKYPALNVTMPNNEQFDKLYIWGVHHPGTDKDQIFLYAQ 21: SNNSFFSRLNWLTHLNFKYPALNVTMPNNEQFDKLYIWGVHPGTDKDQIFLYAQ 21: SNNSFFSRLNWLTHLNFKYPALNVTMPNNEQFDKLYIWGVHPGTDKDQIFLYAQ 21: SNNSFFSRLNWLTHLNFKYPALNVTMPNNEQFDKLYIWGVHPGTDKDQIFLYAQ 21: SNSSFFSRLNWLTHLNFKYPALNVTMPNNEQFDKLYIWGVHPGTDKDQIFLYAQ 21:
AIU46631.1 hemagglutinin Influenza A virus (A/Harda/1718/2012(H1N1)) AFL56683.1 hemagglutinin Influenza A virus (A/Moscow/IIV-45/2012(H1N1)) AIU46632.1 hemagglutinin Influenza A virus (A/Jabalpur/1737/2012(H1N1)) AGV74339.1 hemagglutinin Influenza A virus (A/Ontario/004/2012(H1N1)) AGV74337.1 hemagglutinin Influenza A virus (A/Ontario/024/2012(H1N1)) AGV74326.1 hemagglutinin Influenza A virus (A/Ontario/006/2012(H1N1)) AGV74328.1 hemagglutinin Influenza A virus (A/Ontario/008/2012(H1N1)) AGV74313.1 hemagglutinin Influenza A virus (A/Ontario/008/2012(H3N2)) AIE52965.1 hemagglutinin Influenza A virus (A/Santiago/p37d0/2012(H3N2)) AIE53844.1 hemagglutinin Influenza A virus (A/Santiago/p2d1/2012(H3N2)) AIE53558.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2)) AIE53547.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2)) AGV74311.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2)) AIE53000.1 hemagglutinin Influenza A virus (A/Santiago/p38-2012d5/2012(H3)) consensus	ADGYVTVSTS YSQKVK N GS PRV NQPS MSYWILVK DKLTINSTONLY ADAYVFVGTSRYSKKFKPETAIRPKVRDQEGRMNYYWTLVEPGDKITFEATGNLV ADAYVFVGTSRYSKKFKPETAIRPKVRDQEGRMNYYWTLVEPGDKITFEATGNLL ADAYVFVGTSRYSKKFKPETAIRPKVRDQEGRMNYYWTLVEPGDKITFEATGNLL ADAYVFVGTSRYSKKFKPETAIRPKVRDQEGRMNYYWTLVEPGDKITFEATGNLL ADTYVFVGTSRYSKKFKPETAIRPKVRDQEGRMNYYWTLVEPGDKITFEATGNLV ADTYVFVGTSRYSKKFKPETAIRPKVRDQEGRMNYYWTLVEPGDKITFEATGNLV ADTYVFVGTSRYSKKFKPETAIRPKVRDQEGRMNYYWTLVEPGDKITFEATGNLV ADTYVFVGTSRYSKKFKPETAIRPKVRDQEGRMNYYWTLVEPGDKITFEATGNLV ADTYVFVGTSRYSKKFKPETAIRPKVRDQEGRMNYYWTLVEPGDKITFEATGNLV AAGRITVSTKRSQQAVIPNIGSRPRIRNIPSRISIYWTIVKPGDILLINSTGNLI SSGRITVSTKRSQQAVIPNIGSRPRIRNIPSRISIYWTIVKPGDILLINSTGNLI
AIU46631.1 hemagglutinin Influenza A virus (A/Harda/1718/2012(H1N1)) AFL56683.1 hemagglutinin Influenza A virus (A/Moscow/IIV-45/2012(H1N1)) AIU46632.1 hemagglutinin Influenza A virus (A/Jabalpur/1737/2012(H1N1)) AGV74339.1 hemagglutinin Influenza A virus (A/Ontario/004/2012(H1N1)) AGV74337.1 hemagglutinin Influenza A virus (A/Ontario/024/2012(H1N1)) AGV74326.1 hemagglutinin Influenza A virus (A/Ontario/024/2012(H1N1)) AGV74328.1 hemagglutinin Influenza A virus (A/Ontario/006/2012(H1N1)) AGV74313.1 hemagglutinin Influenza A virus (A/Ontario/008/2012(H1N1)) AIE52965.1 hemagglutinin Influenza A virus (A/Santiago/p37d0/2012(H3N2)) AIE53844.1 hemagglutinin Influenza A virus (A/Santiago/p2d1/2012(H3N2)) AIE53558.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2)) AIE53547.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2)) AGV74311.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2)) AIE53000.1 hemagglutinin Influenza A virus (A/Santiago/p38-2012d5/2012(H3)) consensus	VPRYAFAMERNAGSGIIISDTPVHCONTTCQTPEGAINTSLPFQNIHPITIGKCP VPRYAFAMERNAGSGIIISDTPVHDCNTTCQTPEGAINTSLPFQNIHPITIGKCP VPRYAFAMERNAGSGIIISDTPVHDCNTTCQTPKGAINTSLPFQNIHPITIGKCP VPRYAFAMERNAGSGIIISDTPVHDCNTTCQTPKGAINTSLPFQNIHPITIGKCP VPRYAFAMERDAGSGIIISDTPVHDCNTTCQTPKGAINTSLPFQNIHPITIGKCP VPRYAFAMERDAGSGIIISDTPVHDCNTTCQTPKGAINTSLPFQNIHPITIGKCP VPRYAFAMERNAGSGIIISDTPVHDCNTTCQTPKGAINTSLPFQNIHPITIGKCP VPRYAFAMERNAGSGIIISDTTVHDCNTTCQTPKGAINTSLPFQNIHPITIGKCP VPRYAFAMERNAGSGIIISDTTVHDCNTTCQTPKGAINTSLPFQNIHPITIGKCP APRGYFKIR.SGKSSIMRSDAPIGKCNSACITPNGSIPNDKPFQNVNRITYGACP APRGYFKIR.SGKSSIMRSDAPIGKCKSECITPNGSIPNDKPFQNVNRITYGACP APRGYFKIR.SGKSSIMRSDAPIGKCKSECITPNGSIPNDKPFQNVNRITYGACP APRGYFKIR.SGKSSIMRSDAPIGKCKSECITPNGSIPNDKPFQNVNRITYGACP APRGYFKIR.SGKSSIMRSDAPIGKCKSECITPNGSIPNDKPFQNVNRITYGACP APRGYFKIR.SGKSSIMRSDAPIGKCKSECITPNGSIPNDKPFQNVNRITYGACP APRGYFKIR.SGKSSIMRSDAPIGKCNSECITPNGSIPNDKPFQNVNRITYGACP

consensus

AIU46631.1 hemagglutinin Influenza A virus (A/Harda/1718/2012(H1N1)) AFL56683.1 hemagglutinin Influenza A virus (A/Moscow/IIV-45/2012(H1N1)) AIU46632.1 hemagglutinin Influenza A virus (A/Jabalpur/1737/2012(H1N1)) AGV74339.1 hemagglutinin Influenza A virus (A/Ontario/004/2012(H1N1)) AGV74337.1 hemagglutinin Influenza A virus (A/Ontario/024/2012(H1N1)) AGV74326.1 hemagglutinin Influenza A virus (A/Ontario/006/2012(H1N1)) AGV74328.1 hemagglutinin Influenza A virus (A/Ontario/008/2012(H1N1)) AGV74313.1 hemagglutinin Influenza A virus (A/Ontario/009/2012(H3N2)) AIE52965.1 hemagglutinin Influenza A virus (A/Santiago/p37d0/2012(H3N2)) AIE53844.1 hemagglutinin Influenza A virus (A/Santiago/p2d1/2012(H3N2)) AIE53558.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2)) AIE53547.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2)) AGV74311.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2)) AGV74311.1 hemagglutinin Influenza A virus (A/Santiago/p38-2012d5/2012(H3)) consensus	RVVKSTKLRLATGLRNVPSIQSRGLFGAIAGFIEGGWTGMVDGWYGYHHQNEQGS 376 KYVKSTKLRLATGLRNVPSIQSRGLFGAIAGFIEGGWTGMVDGWYGYHHQNEQGS 376 RYVKQNTLKLATGMRNVPEKQTRGIFGAIAGFIENGWEGMVDGWYGFRHQNSEGR 377 RYVKQSTLKLATGMRNVPEKQTRGIFGAIAGFIENGWEGMVDGWYGFRHQNSEGR 377
AIU46631.1 hemagglutinin Influenza A virus (A/Harda/1718/2012(H1N1)) AFL56683.1 hemagglutinin Influenza A virus (A/Moscow/IIV-45/2012(H1N1)) AIU46632.1 hemagglutinin Influenza A virus (A/Jabalpur/1737/2012(H1N1)) AGV74339.1 hemagglutinin Influenza A virus (A/Ontario/004/2012(H1N1)) AGV74337.1 hemagglutinin Influenza A virus (A/Ontario/024/2012(H1N1)) AGV74326.1 hemagglutinin Influenza A virus (A/Ontario/006/2012(H1N1)) AGV74328.1 hemagglutinin Influenza A virus (A/Ontario/008/2012(H1N1)) AGV74313.1 hemagglutinin Influenza A virus (A/Ontario/009/2012(H3N2)) AIE52965.1 hemagglutinin Influenza A virus (A/Santiago/p37d0/2012(H3N2)) AIE53844.1 hemagglutinin Influenza A virus (A/Santiago/p2d1/2012(H3N2)) AIE53558.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2)) AIE53547.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2)) AGV74311.1 hemagglutinin Influenza A virus (A/Santiago/p24d2/2012(H3N2)) AGV74311.1 hemagglutinin Influenza A virus (A/Santiago/p38-2012d5/2012(H3)) consensus	GYAADLKSTQNAIDKITNKVNSVIEKMNTQFTAVGKEFNHLEKRIENLNKKVDDG 431 GQAADLKSTQNAIDKITNKVNSVIEKMNTQFTAVGKEFNHLEKRIENLNKKVDDG 431 GQAADLKSTQNAIDQINGKLNRLIGKTNEKFHQIEKEFSEVEGRIQDLEKYVEDT 432 GQAADLKSTQAAIDQINGKLNRLIGKTNEKFHQIEKEFSEVEGRIQDLEKYVEDT 432 GQAADLKSTQAAIDQINGKLNRLIGKTNEKFHQIEKEFSEVEGRIQDLEKYVEDT 432 GQAADLKSTQAAIDQINGKLNRLIGKTNEKFHQIEKEFSEVEGRIQDLEKYVEDT 432 GQAADLKSTQAAIDQINGKLNRLIGKTNEKFHQIEKEFSEVEGRIQDLEKYVEDT 432 GQAADLKSTQAAIDQINGKLNRLIGKTNEKFHQIEKEFSEVEGRIQDLEKYVEDT 432
AIU46631.1 hemagglutinin Influenza A virus (A/Harda/1718/2012(H1N1)) AFL56683.1 hemagglutinin Influenza A virus (A/Moscow/IIV-45/2012(H1N1)) AIU46632.1 hemagglutinin Influenza A virus (A/Jabalpur/1737/2012(H1N1)) AGV74339.1 hemagglutinin Influenza A virus (A/Ontario/004/2012(H1N1)) AGV74337.1 hemagglutinin Influenza A virus (A/Ontario/024/2012(H1N1)) AGV74326.1 hemagglutinin Influenza A virus (A/Ontario/006/2012(H1N1)) AGV74328.1 hemagglutinin Influenza A virus (A/Ontario/008/2012(H1N1)) AGV74313.1 hemagglutinin Influenza A virus (A/Ontario/009/2012(H3N2)) AIE52965.1 hemagglutinin Influenza A virus (A/Santiago/p37d0/2012(H3N2)) AIE53844.1 hemagglutinin Influenza A virus (A/Santiago/p2d1/2012(H3N2)) AIE53558.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2)) AIE53547.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2)) AGV74311.1 hemagglutinin Influenza A virus (A/Santiago/p2d42/2012(H3N2)) AGV74311.1 hemagglutinin Influenza A virus (A/Santiago/p38-2012d5/2012(H3N))	KLDIWTYNAELLVLENERTLDYHDSNVKNLYEKVRNQLKNNAKEIGNGCFEFYH 486 FLDIWTYNAELLVLENERTLDYHDSNVKNLYEKVRNQLKNNAKEIGNGCFEFYH 486 KIDIWSYNAELLVLENQHTIDLTDSEMNKLFEKTKKQLRENAEDMGNGCFKIYH 487 KIDLWSYNAELLVALENQHTIDLTDSEMNKLFEKTKKQLRENAEDMGNGCFKIYH 487

```
AIU46631.1 hemagglutinin Influenza A virus (A/Harda/1718/2012(H1N1))
AFL56683.1 hemagglutinin Influenza A virus (A/Moscow/IIV-45/2012(H1N1))
AIU46632.1 hemagglutinin Influenza A virus (A/Jabalpur/1737/2012(H1N1))
AGV74339.1 hemagglutinin Influenza A virus (A/Ontario/004/2012(H1N1))
AGV74337.1 hemagglutinin Influenza A virus (A/Ontario/024/2012(H1N1))
AGV74326.1 hemagglutinin Influenza A virus (A/Ontario/006/2012(H1N1))
AGV74328.1 hemagglutinin Influenza A virus (A/Ontario/008/2012(H1N1))
AGV74313.1 hemagglutinin Influenza A virus (A/Ontario/009/2012(H3N2))
AIE52965.1 hemagglutinin Influenza A virus (A/Santiago/p37d0/2012(H3N2))
AIE53844.1 hemagglutinin Influenza A virus (A/Santiago/p2d1/2012(H3N2))
AIE53558.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2))
AIE53547.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2))
AGV74311.1 hemagglutinin Influenza A virus (A/Ontario/001/2012(H3N2))
AIE53000.1 hemagglutinin Influenza A virus (A/Santiago/p38-2012d5/2012(H3))
consensus
```

KCDN<mark>TCMESVK</mark>NGTYD<mark>YPKYSE</mark>EAKLNREE 541 KCDNTCMESVKNGTYDYPKYSEEAKLNREEIDGVKLESTRIYQILAIYSTVASSL 541 KCDNTCMESVKNGTYDYPKYSEEAKLNREEIDGVKLESTRIYQILAIYSTAASSL KCDNTCMESVKNGTYDYPKYSEEAKLNREEIDGVKLESTRIYQILAIYSTAASSL 541 541 KCDNTCMESVKNGTYDYPKYSEEAKLNREKIDGVKLESTRIYQILAIYSTVASSL 541 KCDNTCMESVK<mark>NGTYDYPKYSEEA</mark>KLNREKIDGVKLESTRIYQILAIYSTVASSL 541 KCDNACIGSIRNGTYDHDVYRDEALNNRFQIKGVELKSGYKDWILWIS.FAISCF 541 KCDNACIGSIRNGTYDHDVYRDEALNNRFQIKGVELKSGYKDWILWIS.FAISCF KCDN<mark>ACIGSIRNGTYD</mark>HNVYRDEALNNRFQIKGVELKSGYKDWILWIS.FAISCF 541 541 KCDNACIGSIRNGTYDHNVYRDEALNNRFQIKGVELKSGYKDWILWIS.FAISCF 541 KCDNACIGSIRNGTYDHNVYRDEALNNRFKIKGVELKSGYKDWILWIS.FAISCF KCDNACIGSIRNGTYNHDVYRDEALNNRFQIKGVELKSGYKDWILWIS.FAISCF 541 541 KCDNACIGSIRNGTYNHDVYRDEALNNRFQIKGVELKSGYKDWILWIS.FAISCF 541 !!!!* *

logo

```
AIU46631.1 hemagglutinin Influenza A virus (A/Harda/1718/2012(H1N1))
AFL56683.1 hemagglutinin Influenza A virus
                                           (A/Moscow/IIV-45/2012(H1N1))
AIU46632.1 hemagglutinin Influenza A virus
                                           (A/Jabalpur/1737/2012(H1N1))
AGV74339.1 hemagglutinin Influenza A virus (A/Ontario/004/2012(H1N1))
AGV74337.1 hemagglutinin Influenza A virus (A/Ontario/024/2012(H1N1))
AGV74326.1 hemagglutinin Influenza A virus (A/Ontario/006/2012(H1N1))
AGV74328.1 hemagglutinin Influenza A virus (A/Ontario/008/2012(H1N1))
AGV74313.1 hemagglutinin Influenza A virus (A/Ontario/009/2012(H3N2))
AIE52965.1 hemagglutinin Influenza A virus (A/Santiago/p37d0/2012(H3N2))
AIE53844.1 hemagglutinin Influenza A virus (A/Santiago/p2d1/2012(H3N2))
AIE53558.1 hemagglutinin Influenza A virus (A/Santiago/p2d2/2012(H3N2))
AIE53547.1 hemagglutinin Influenza A virus (A/Santiago/p24d2/2012(H3N2))
AGV74311.1 hemagglutinin Influenza A virus (A/Ontario/001/2012(H3N2))
AIE53000.1 hemagglutinin Influenza A virus (A/Santiago/p38-2012d5/2012(H3))
consensus
```



non-conserved

imes 250% conserved