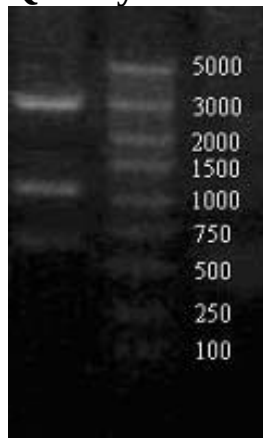


pGH-H3(A/Hong Kong/1/1968)(H3N2)

Cat# HA-HK68

Gene Name	pGH-H3(A/Hong Kong/1/1968)(H3N2)
Gene description:	Codon optimized cDNA clone of H3N2 hemagglutinin (aa 1-566)(A/Hong Kong/1/1968) for high-level expression in mammalian cells
cDNA Insert Size	1704 bp codon optimized H3N2 hemagglutinin (A/ Hong Kong/1/1968) cDNA with a Kozak consensus sequence (ACCATGA), corresponding to amino acid 1-566 (Gene accession# AAK51718)
Vector	pGH
Cloning Site	SmaI
Concentration	1 µg (20 µl), dissolved in 10 mM Tris/HCl (pH 8.5).
Storage	4 °C

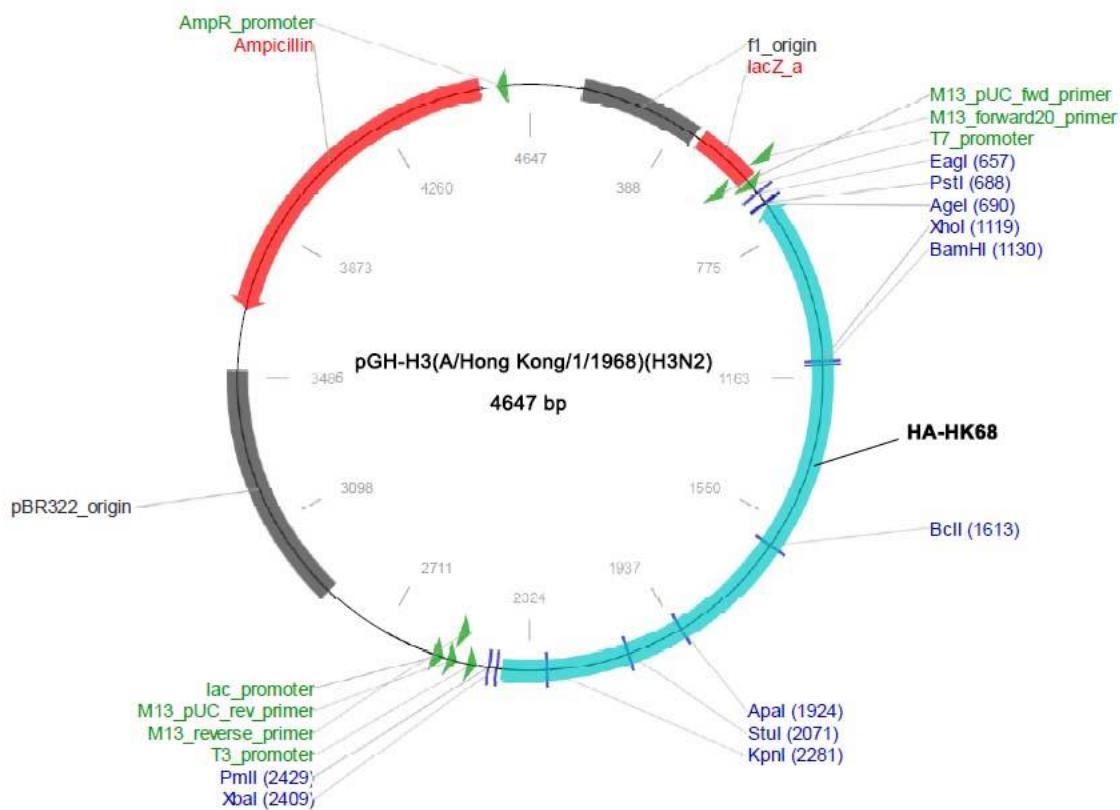
Quality control:



RES:HindIII



Construct map:



Detailed sequence of pGH-H3 (A/Hong Kong/1/1968/H3N2):

1	CTAAATTGTA	AGCGTTAATA	TTTTGT TAAA	ATTCGCGTTA	AATTTTTGTT	AAATCAGCTC
61	ATTTTTTAAC	CAATAGGCCG	AAATCGGCAA	AATCCCTTAT	AAATCAAAAG	AATAGACCGA
121	GATAGGGTTG	AGTGTGTGTC	CAGTTTGGAA	CAAGAGTCCA	CTATTAAAGA	ACGTGGACTC
181	CAACGTCAAA	GGGCGAAAAA	CCGTCTATCA	GGGCGATGGC	CCACTACGTG	AACCATCACC
241	CTAATCAAGT	TTTTTGGGGT	CGAGGTGCCG	TAAAGCACTA	AATCGGAACC	CTAAAGGGAG
301	CCCCCGATTT	AGAGCTTGAC	GGGGAAAGCC	GGCGAACGTG	GCGAGAAAGG	AAGGGAAGAA
361	AGCGAAAGGA	GCGGGCGCTA	GGGCGCTGGC	AAGTGTAGCG	GTCACGCTGC	GCGTAACCAC
421	CACACCCGCC	GCGCTTAATG	CGCCGCTACA	GGGCGCGTCC	CATTTCGCCAT	TCAGGCTGCG
481	CAACTGTTGG	GAAGGGCGAT	CGGTGCGGGC	CTCTTCGCTA	TTACGCCAGC	TGGCGAAAGG
541	GGGATGTGCT	GCAAGGCGAT	TAAGTTGGGT	AACGCCAGGG	TTTTCCAGT	CACGACGTTG
601	TAAACGACG	GCCAGTGAGC	GCGCGTAATA	CGACTCACTA	TAGGGCGAAT	TGGGTACGGC
661	CGTCAAGGCC	AAGCTTCCCA	CTACTGCAGA	CCGGTTTAGA	TACAAATGTT	GCAGCGGATG
721	TTTCCGCGCT	GACAGGCCCA	CATAATAAAC	CCCAGAAGCA	CCACGCACAA	CAGAAAGCAG
781	CTAATGGCAA	AGCTGATCCA	CAAGATCCAG	TCTTTATAAC	CACTCTTCAG	CTCCACGCC
841	TTGATCTGAA	ACCGATTGTT	AAGAGCCTCA	TCTCTATAGA	CGTCATGATC	GTAAGTACCG
901	TTCCGAATGG	ACTCGATACA	TGCGTTGTCT	CATTTGTGAT	AGATCTTGAA	ACAGCCATTG
961	CCCATGTCTT	CTGCATTTTC	TCTGAGCTGC	CGCCTGGTTT	TCTCAAAAAG	TTTGTTTCATT
1021	TCAGAATCAG	TCAGGTCAAT	AGTATGTTGA	TTCTCCAAGG	CAACCAGCAA	CTCAGCATTA
1081	TAGCTCCAGA	GATCGATCTT	TGTGTCTTCC	ACATATTTCT	CGAGATCTTG	GATCCGACCT
1141	TCCACCTCGG	AGAACTCTTT	TTTCGATCTG	TGGAACTTT	CATTTGTCTT	TTTCGATGACC
1201	CGATTCAACT	TTCCGTTGAT	TTGGTTCGAT	GCAGCTTGGG	TGGACTTCAG	GTCAGCTGCT
1261	TGTCCGGTCC	CCTCGCTGTT	CTGGTGCCTA	AATCCGTACC	AACCGTCGAT	CATTCTTCC
1321	CAGCCGTTTT	CGATGAACCC	GGCAATGGCA	CCAAACAGTC	CTCTAGTTTG	TTTTTCGGGA
1381	ACGTTGCGCA	TCCCGGTAGC	CAGTTTCAGG	GTGTTTTGCT	TCACGTATTT	GGGACAAGCG
1441	CCATAAGTGA	TCTTATTGAC	GTTCTGAAAG	GGTTTGTTCAT	TGGGGATGGA	GCCATTAGGT
1501	GTAATGCATT	CACTGATACA	GGTATCAATA	GGGGCATCGG	AGCGCATAAT	GGATGATTTT
1561	CCGGTCCCTCA	TTTTGAAGTA	GCCTCTGGGG	GCAATCAAAT	TCCCATTAAT	ATTGATCACC
1621	AACACATCCC	CAGGTTTCAC	GATGGTCCAA	TAAATGCTGA	TCCGAGAGGA	CAGCCCGCGC
1681	ACCCAGGGCC	TGGAACCAAT	ATTTGGGATG	ATGGTCTGTT	GGGATCTCCT	TGTACTCACA
1741	GTCACGCGAC	CTGAAGCTTG	AACGTAAAGA	GAGGTTTGCT	CCTGATTAGT	TGAGGGATGG
1801	TGCACGCCCC	AGATATACAG	CTTATCAAAA	TTATCGTTAT	TAGGCATTGT	GACGTTCAAA
1861	ACAGGGTATG	TGGACCCGGA	TTTTGTCAAC	CAGTTCAACC	GAGAAAAGAA	TCCTGATCCG
1921	GGCCCCCGCT	TGCAGGCATT	ACTACCCCGG	TTTTGGGTGA	CGCCGGTCCA	GGTAAAACCC
1981	TCAGTGATGA	ACTCCAATGT	GCCTGAGGAG	GCAACCAGAG	AGCGCAAAT	TGCGTAATCT
2041	GGGACGTCGT	AGGGGTAAACA	GTTGGAGAAG	GCCTTGCTGC	GTTTCGACGA	CAGGTCCCAG
2101	GTCTCATTCT	GGAACACATC	ACAATGTGGG	TCTCCCAGCA	AAGCGTCGAT	AAGTGTGCAA
2161	TCGATGCCAT	CAAGGATGCG	ATGTGGGTGA	TTGCAGATCT	TCCCGGTGCT	TGAACTCTGA
2221	ACAAGTTCTG	TTGCGTTAGT	AACTTCAATC	TGGTCATCAG	TAATGGTTTT	AACGAGGGTA
2281	CCGTTGGGCA	CTGCATGGTG	TCCGAGGCAG	AGGGTAGCGG	TAGAATTGTC	GTTTCCTGGG
2341	AGATCTTGAC	CCAGGGCCAA	ACAGAAGATA	TAAAGACAATG	CGATAATGGT	CTTCATGGTG
2401	GCGATATCTC	TAGATAAGTG	GGATATCACG	TGAAGCTTGC	AAGCTCCAGC	TTTTGTTCCC
2461	TTTAGTGAGG	GTAAATTGCG	CGCTTGCGCT	AATCATGGTC	ATAGCTGTTT	CCTGTGTGAA
2521	ATTGTTATCC	GCTCACAATT	CCACACAACA	TACGAGCCGG	AAGCATAAAG	TGTAAAGCCT
2581	GGGGTGCCTA	ATGAGTGAGC	TAACACACAT	TAATTGCGTT	GCGCTCACTG	CCCGCTTTCC
2641	AGTCGGGAAA	CCTGTCTGTC	CAGCTGCATT	AATGAATCGG	CCAACGCGCG	GGGAGAGGCG
2701	GTTTGCCTAT	TGGGCGCTCT	TCCGCTTCCT	CGCTCACTGA	CTCGCTGCGC	TCGGTCTGTT
2761	GGCTGCGGCG	AGCGGTATCA	GCTCACTCAA	AGGCGGTAAT	ACGGTTATCC	ACAGAATCAG
2821	GGGATAACGC	AGGAAAGAAC	ATGTGAGCAA	AAGGCCAGCA	AAAGGCCAGG	AACCGTAAAA
2881	AGGCCGCGTT	GCTGGCGTTT	TTCCATAGGC	TCCGCCCCC	TGACGAGCAT	CACAAAAATC
2941	GACGCTCAAG	TCAGAGGTGG	CGAAACCCGA	CAGGACTATA	AAGATACCAG	GCGTTTCCCC



```

3001 CTGGAAGCTC CCTCGTGCGC TCTCCTGTTC CGACCCTGCC GCTTACCGGA TACCTGTCCG
3061 CCTTTCTCCC TTCGGGAAGC GTGGCGCTTT CTCATAGCTC ACGCTGTAGG TATCTCAGTT
3121 CGGTGTAGGT CGTTCGCTCC AAGCTGGGCT GTGTGCACGA ACCCCCCGTT CAGCCCCGACC
3181 GCTGCGCCTT ATCCGGTAAC TATCGTCTTG AGTCCAACCC GGTAAGACAC GACTTATCGC
3241 CACTGGCAGC AGCCACTGGT AACAGGATTA GCAGAGCGAG GTATGTAGGC GGTGCTACAG
3301 AGTTCTTGAA GTGGTGGCCT AACTACGGCT ACACTAGAAG GACAGTATTT GGTATCTGCG
3361 CTCTGCTGAA GCCAGTTACC TTCGGAAAAA GAGTTGGTAG CTCTTGATCC GGCAAACAAA
3421 CCACCGCTGG TAGCGGTGGT TTTTGTGTTT GCAAGCAGCA GATTACGCGC AGAAAAAAG
3481 GATCTCAAGA AGATCCTTTG ATCTTTTCTA CGGGGTCTGA CGCTCAGTGG AACGAAAAC
3541 CACGTTAAGG GATTTTGGTC ATGAGATTAT CAAAAAGGAT CTTACCTAG ATCCTTTTAA
3601 ATTAATAATG AAGTTTAAA TCAATCTAAA GTATATATGA GTAAACTTGG TCTGACAGTT
3661 ACCAATGCTT AATCAGTGAG GCACCTATCT CAGCGATCTG TCTATTTCTG TCATCCATAG
3721 TTGCCTGACT CCCCCTCGTG TAGATAACTA CGATACGGGA GGGCTTACCA TCTGGCCCCA
3781 GTGCTGCAAT GATACCGCGA GATCCACGCT CACCGGCTCC AGATTTATCA GCAATAAACC
3841 AGCCAGCCGG AAGGGCCGAG CGCAGAAAGT GTCTTGCAAC TTTATCCGCC TCCATCCAGT
3901 CTATTAATTG TTGCCGGGAA GCTAGAGTAA GTAGTTCGCC AGTTAATAGT TTGCGCAACG
3961 TTGTTGCCAT TGCTACAGGC ATCGTGGTGT CACGCTCGTC GTTTGGTATG GCTTCATTCA
4021 GCTCCGGTTC CCAACGATCA AGGCGAGTTA CATGATCCCC CATGTTGTGC AAAAAAGCGG
4081 TTAGCTCCTT CGGTCTCCG ATCGTTGTCA GAAGTAAGTT GGCCGCAGTG TTATCACTCA
4141 TGGTTATGGC AGCACTGCAT AATTCTCTTA CTGTCATGCC ATCCGTAAGA TGCTTTTCTG
4201 TGACTGGTGA GTACTCAACC AAGTCATTCT GAGAATAGTG TATGCGGCGA CCGAGTTGCT
4261 CTTGCCCGGC GTCAATACGG GATAATACCG CGCCACATAG CAGAACTTTA AAAGTGCTCA
4321 TCATTGGAAG AC GTTCTTCG GGGCGAAAAC TCTCAAGGAT CTTACCGCTG TTGAGATCCA
4381 GTTCGATGTA ACCCACTCGT GCACCCAAC TATCTTCAGC ATCTTTTACT TTCACCAGCG
4441 TTTCTGGGTG AGCAAAAACA GGAAGGCAAA ATGCCGCAAA AAAGGGAATA AGGGCGACAC
4501 GGAAATGTTG AATACTCATA CTCTTCCTTT TTCAATATTA TTGAAGCATT TATCAGGGTT
4561 ATTGTCTCAT GAGCGGATAC ATATTTGAAT GTATTTAGAA AAATAAACAA ATAGGGGTTC
4621 CGCGCACATT TCCCCGAAAA GTGCCAC

```

Detailed amino acid sequence of the codon optimized cDNA clone:

```

1  MKTIIALSYI FCLALGQDLP GNDNSTATLC LGHHAVPNGT LVKTITDDQI EVTNATELVQ
61  SSSTGKICNN PHRILDGIDC TLIDALLGDP HCDVFQNETW DLFVERSKAF SNCYPYDVPD
121 YASLRSLVAS SGTLEFITEG FTWTGVTQNG GSNACKRGP SGFFSRLNWL TKSGSTYPVL
181 NVTMPNNDNF DKLYIWGVH PSTNQEQTSL YVQASGRVTV STRRSQQTII PNIGSRPWVR
241 GLSSRISIW TIVKPGDVLV INSNGNLIAP RGYFKMRTGK SSIMRSDAPI DTCISECITP
301 NGSIPNDKPF QNVNKITYGA CPKYVKQNTL KLATGMRNVP EKQTRGLFGA IAGFIENGWE
361 GMIDGWYGFR HQNSEGTGQA ADLKSTQAAI DQINGKLN RV IEKTNEKFHQ IEKEFSEVEG
421 RIQDLEKYVE DTKIDLWSYN AELLVALENQ HTIDLTDSEM NKLFEKTRRQ LRENAEDMGN
481 GCFKIYHKCD NACIESIRNG TYDHDVYRDE ALNNRFQIKG VELKSGYKDW ILWISFAISC
541 FLLCVVLLGF IMWACQRGNI RCNICI

```

