

DRAWINGS

QKEVEQNSGPLSVPEGAIASLNCTYSDRVSQSFFWYRQYSGKSPELIMSIYS
NGDKEDGRFTAQLNKASQYVSLLRDSQPSDSATYLCASLKGNNDMRFGA
GTRLTVKP (SEQ ID NO: 1)

FIG. 1a

Cagaaggaggtggagcagaattctggaccctcagtggtccagagggagccattgcctctctcaactgcacttacagt
gaccgagttcccagtccttctctgttacagacaatattctgggaaaagccctgagttgataatgtccatatactccaatg
gtgacaaaagaagatggaaggtttacagcacagctcaataaagccagccagtatgtttctctgctcatcagagactccca
gccagtgattcagccacctacctctgtgcctccctcaagggttaacaatgacatgcgcttggagcagggaccagact
gacagtaaaacca (SEQ ID NO: 2)

FIG. 1b

QKEVEQNSGPLSVPEGAIASLNCTYSDRVSQSFFWYRQYSGKSPELIMSIYS
NGDKEDGRFTAQLNKASQYVSLLRDSQPSDSATYLCASLKGNNDMRFGA
GTRLTVKPNIQNPDPVYQLRDSKSSDKSVCLFTDFDSQTNVSQSKDSDVYI
TDKTVLDMRSMDFKSNSAVAWSNKSDFA CANAFNNSIIPEDTFFPSPRESSCD
VKLVEKSFETDTNLFQNL SVIGFRILLK VAGFNLLMTLRLWSS (SEQ ID
NO: 3)

FIG. 1c

cagaaggaggtggagcagaattctggaccctcagtggtccagagggagccattgcctctctcaactgcacttacagt
gaccgagttcccagtccttctctgttacagacaatattctgggaaaagccctgagttgataatgtccatatactccaatg
gtgacaaaagaagatggaaggtttacagcacagctcaataaagccagccagtatgtttctctgctcatcagagactccca
gccagtgattcagccacctacctctgtgcctccctcaagggttaacaatgacatgcgcttggagcagggaccagact
gacagtaaaaccaaAtccagaaccctgaccctgccgtgtaccagctgagagactctaaatccagtgacaagtctgt
ctgcctattcaccgattttgattctcaacaaatgtgtcacaaagtaaggattctgatgtgtatatcacagacaaaactgtg
ctagacatgaggtctatggactcaagagcaacagtgctgtggcctggagcaacaaatctgactttgcatgtgcaaacg
cctcaacaacagcattattccagaagacaccttctccccagcccagaaagtctctgtgatgtcaagctggcgagaaa
agctttgaaacagatacgaacctaaactttcaaaacctgtcagtgattgggttcgaatcctcctctgaaagtggccgg
gttaatctgctcatgacgctgcggctgtggtccagc (SEQ ID NO: 4)

FIG. 1d

MKSLRVLLVILWLQLSWVWSQQKEVEQNSGPLSVPEGAIASLNCTYSDRVS
QSFFWYRQYSGKSPELIMSIYSNGDKEDGRFTAQLNKASQYVSLLRDSQP
SDSATYLCASLKGNNDMRFGAGTRLTVKPNIQNPDPVYQLRDSKSSDKSV
CLFTDFDSQTNVSQSKDSDVYITDKTVLDMRSMDFKSNSAVAWSNKSDFA
CANAFNNSIIPEDTFFPSPRESSCDVKLVEKSFETDTNLFQNL SVIGFRILLK
VAGFNLLMTLRLWSS (SEQ ID NO: 22)

FIG. 1e

atgaaatccttgagagttttactagtgtcctgtggcttcagttgagctgggttggagccaacagaaggaggtggagca
gaattctggacccctcagtggtccagagggagccattgcctctctcaactgcacttacagtgaccgagttccagtcctt
cttctgggtacagacaatatctgggaaaagccctgagttgataatgtccatatactccaatggtgacaaagaagatggaa
ggtttacagcacagctcaataaagccagccagtgatgtttctgtctcatcagagactcccagcccagtgattcagccacc
tacctctgtgcctccctcaagggtacaatgacatgcgcttggagcagggaccagactgacagtaaaaccaaAtc
cagaaccctgaccctgccgtgtaccagctgagagactctaaatccagtgacaagtctgtctgcctattcaccgatttgat
tctcaacaaatgtgtcacaagtaaggattctgatgtgtatatcacagacaaaactgtgctagacatgaggtctatgga
cttcaagagcaacagtgctgtggcctggagcaacaaatctgactttgcatgtgcaaacgccttcaacaacagcattatc
cagaagacaccttctccccagcccagaaagtctgtgatgtcaagctggctgagaaaagcttgaacagatacgaa
cctaaactttcaaacctgtcagtgattgggtccgaatcctcctctgaaaagtgccgggttaatctgctcatgacgct
cgcggtgtggtcagc (SEQ ID NO: 23)

FIG. 1f

GAGVSQSPRYKVAKRQDVALRCDPISGHVSLFWYQQALGQGPEFLTYF
QNEAQLDKSGLPSDRFFAERPEGSVSTLKIQRQQEDSAVYLCASSSSRW
EQQFFGPGTRLTVL (SEQ ID NO: 5)

FIG. 2a

ggtgctggagtctcccagtcacctaggtacaaagtcgcaaagagaggacaggatgtagctctcaggtgtgatccaattt
cgggtcatgtatccctttttggtaccaacaggccctggggcagggggccagagttctgactatttcagaatgaagctc
aactagacaaatcggggctgccagtgatcgctctttgcagaaaggcctgagggatccgtctccactctgaagatcca
gcgcacacagcaggaggactccgccgtgtatctctgtgccagcagctccagtaggtgggagcagcagttcttcgggc
cagggacacggctcaccgtgcta (SEQ ID NO: 6)

FIG. 2b

GAGVSQSPRYKVAKRQDVALRCDPISGHVSLFWYQQALGQGPEFLTYFQ
NEAQLDKSGLPSDRFFAERPEGSVSTLKIQRQQEDSAVYLCASSSSRWEQ
QFFGPGTRLTVLEDLKNVFPPEVAVFEPSEAEISHTQKATLVCLATGFYPDH
VELSWWWNGKEVHSGVSTDPQPLKEQPALNDSRYCLSSRLRVSATFWQNP
RNHFRCQVQFYGLSENDEWTQDRAKPVTQIVSAEAWGRADCGFTSESYQ
QGVLSATILYEILLGKATLYAVLVLSALVLMAMVVRKDSRG (SEQ ID NO: 7)

FIG. 2c

Ggtgctggagtctcccagttcccctaggtacaaagtcgcaaagagaggacaggatgtagctctcaggtgtgatccaatt
tcgggtcatgtatcccttttttgggtaccaacaggccctggggcaggggcccagagtttctgacttattccagaatgaagct
caactagacaaatcggggctgccagtgatcgcttctttgcagaaaggcctgagggatccgtctccactctgaagatcc
agcgcacacagcaggaggactccgctgtatctctgtgccagcagctccagtaggtgggagcagcagttcttcggg
ccagggcacggctcaccgtgctaGaggacctgaaaaacgtgtcccacccgaggtcgctgtgtttgagccatcaga
agcagagatctcccacacccaaaaggccacactggtgtgcctggccacaggttctaccccgaccacgtggagctg
agctggtgggtgaatgggaaggaggtgcacagtggggtcagcacagacccgcagccccctcaaggagcagccgc
cctcaatgactccagatactgcctgagcagccgctgagggtctcgccaccttctggcagaacccccgcaaccactt
ccgctgtcaagtccagttctacgggctctcggagaatgacgagtggaccaggatagggccaaacctgtcaccaga
tcgtcagcgccgaggcctggggtagagcagactgtggcttcacctccgagcttaccagcaaggggtcctgtctgcc
ccatcctctatgagatcttgctagggaaggccaccttgatgccgtgctggtcagtgccctcgctgtatggccatggtc
aagagaaaggattccagaggc (SEQ ID NO: 8)

FIG. 2d

MGTRLLCWVVLGFLGTDHTGAGVSQSPRYKVAKRQDVALRCDPISGHV
SLFWYQQALGQGPEFLTYFQNEAQLDKSGLPSDRFFAERPEGSVSTLKIQR
QQEDSAVYLCASSSRWEQQFFGPGTRLTVLEDLKNVFPPEVAVFEPSEAEI
SHTQKATLVCLATGFYPDHVELSWVNGKEVHSGVSTDPQPLKEQPALND
SRYCLSSRLRVSATFWQNPRNHFRCQVQFYGLSENDEWTQDRAKPVQIV
SAEAWGRADCFTSESYQQGVLSATILYEILLGKATLYAVLVSAVLMLAMV
KRKDSRG (SEQ ID NO: 24)

FIG. 2e

atgggcaccaggctcctctgctgggtggtcctgggttcttagggacagatcacacagggtgctggagtctcccagtc
cctaggtacaaagtcgcaaagagaggacaggatgtagctctcaggtgtgatccaatttcgggtcatgtatccctttttgg
taccaacaggccctggggcaggggcccagagtttctgacttattccagaatgaagctcaactagacaaatcggggctg
cccagtgatcgcttctttgcagaaaggcctgagggatccgtctccactctgaagatccagcgcacacagcaggagga
ctccgctgtatctctgtgccagcagctccagtaggtgggagcagcagttcttcgggccagggacacggctcaccgt
gctaGaggacctgaaaaacgtgtcccacccgaggtcgctgtgtttgagccatcagaagcagagatctcccacacc
aaaaggccacactggtgtgcctggccacaggttctaccccgaccacgtggagctgagctggtgggtgaatgggaa
ggaggtgcacagtggggtcagcacagacccgcagccccctcaaggagcagcccgccctcaatgactccagatactg
cctgagcagccgctgagggtctcgccaccttctggcagaacccccgcaaccacttcgctgtcaagtccagttcta
cgggctctcggagaatgacgagtggaccaggatagggccaaacctgtcaccagatcgctcagcgccgaggcctg
gggtagagcagactgtggcttcacctccgagcttaccagcaaggggtcctgtctgccaccatcctctatgagatcttg
tagggaaggccaccttgatgccgtgctggtcagtgccctcgctgtatggccatggtcaagagaaaggattccagag
gc (SEQ ID NO: 25)

FIG. 2f

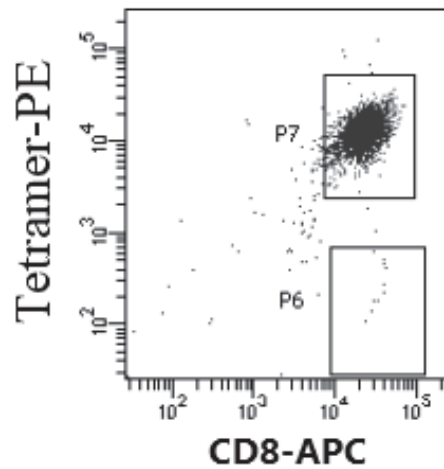


FIG. 3

MQKEVEQNSGPLSVPEGAIASLNCTYSDRVVSQFFWYRQYSGKSPELIMS
IYSNGDKEDGRFTAQLNKASQYVSLLRDSQPSDSATYLCASLKGNNDM
RFGAGTRLTVKPNIQNPDAVYQLRDSKSSDKSVCLFTDFDSQTNVSQSK
DSDVYITDKCVLDMRSMDFKSNSAVAWSNKSDFACANAFNNSIIPEDTFF
PSPESS (SEQ ID NO: 26)

FIG. 4a

ATGCAGAAAGAAGTGGAACAGAATTCTGGACCCCTCAGTGTTCCAGAG
GGAGCCATTGCCTCTCTCAACTGCACTTACAGTGACCGAGTTTCCCAGT
CCTTCTTCTGGTACAGACAATATTCTGGGAAAAGCCCTGAGTTGATAATG
TCCATATACTCCAATGGTGACAAAGAAGATGGAAGGTTTACAGCACAGC
TCAATAAAGCCAGCCAGTATGTTTCTCTGCTCATCAGAGACTCCCAGCCC
AGTGATTTCAGCCACCTACCTCTGTGCCTCCCTCAAGGGTAACAATGACAT
GCGCTTTGGAGCAGGGACCAGACTGACAGTAAAACCAAATATCCAGAA
CCCTGACCCTGCCGTGTACCAGCTGAGAGACTCTAAGTCGAGTGACAAG
TCTGTCTGCCTATTACCGATTTTGATTCTCAAACAAATGTGTCACAAAG
TAAGGATTCTGATGTGTATATCACAGACAAATGTGTGCTAGACATGAGGT
CTATGGACTTCAAGAGCAACAGTGCTGTGGCCTGGAGCAACAAATCTGA
CTTTGCATGTGCAAACGCCTTCAACAACAGCATTATTCCAGAAGACACC
TTCTTCCCCAGCCCAGAAAGTTCCTAA (SEQ ID NO: 27)

FIG. 4b

MGAGVSQSPRYKVAKRQGDVALRCDPISGHVSLFWYQQALGQGPEFLTYF
QNEAQLDKSGLPSDRFFAERPEGSVSTLKIQRQQEDSAVYLCASSSSRWE
QQFFGPGTRLTVLEDLKNVFPPEVAVFEPSEAEISHTQKATLVCLATGFYPD
HVELSWVNGKEVHSGVCTDPQPLKEQPALNDSRYALSSRLRVSATFWQD
PRNHFRCQVQFYGLSENDEWTQDRAKPVTQIVSAEAWGRAD (SEQ ID NO:
28)

FIG. 5a

ATGGGTGCAGGTGTTAGCCAGTCCCCTAGGTACAAAGTCGCAAAGAGA
GGACAGGATGTAGCTCTCAGGTGTGATCCAATTTCTGGGGTCATGTATCCCT
TTTTTGGTACCAACAGGCCCTGGGGCAGGGGCCAGAGTTTCTGACTTAT
TTCCAGAATGAAGCTCAACTAGACAAATCGGGGCTGCCCAGTGATCGCT
TCTTTGCAGAAAGGCCTGAGGGATCCGTCTCCACTCTGAAGATCCAGCG
CACACAGCAGGAGGACTCCGCCGTGTATCTCTGTGCCAGCAGCTCCAGT
AGGTGGGAGCAGCAGTTCTTCGGGGCCAGGGACACGGCTCACCGTGCTA
GAGGACCTGAAAAACGTGTTCCCAACCCGAGGTCGCTGTGTTTGAGCCAT
CAGAAGCAGAGATCTCCACACCCAAAAGGCCCACTGGTGTGCCTGG
CCACCGGTTTCTACCCCGACCACGTGGAGCTGAGCTGGTGGGTGAATGG
GAAGGAGGTGCACAGTGGGGTCTGCACAGACCCGCAGCCCCCTCAAGGA
GCAGCCCGCCCTCAATGACTCCAGATACGCTCTGAGCAGCCGCCTGAGG
GTCTCGGCCACCTTCTGGCAGGACCCCCGCAACCACTTCCGCTGTCAAG
TCCAGTTCTACGGGCTCTCGGAGAATGACGAGTGGACCCAGGATAGGGC
CAAACCCGTCACCCAGATCGTCAGCGCCGAGGCCTGGGGTAGAGCAGA
CTAA (SEQ ID NO: 29)

FIG. 5b

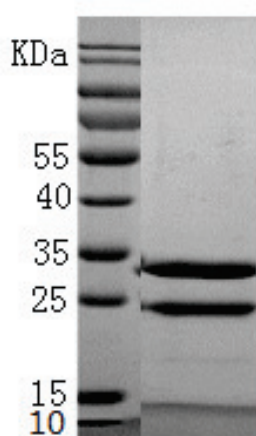


FIG. 6a

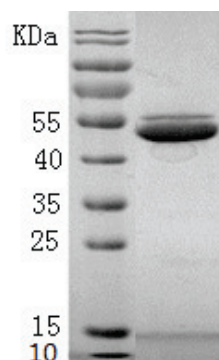


FIG. 6b

QKEVEQNSGPLSVPEGENVSINCTYSDRVSQSFFWYRQYSGKSPELIMSIYS
 NGDKEDGRFTAQLNKASQYVSLEIRDVQPSDSATYLCASLKGNNDMRFGA
 GTRLTVKPGGGSEGGGSEGGGSEGGGSEGGTGGAGVSQSPRYLSVKRGQD
 VTLRCDPISGHVSLFWYQQAPGQGPEFLTYFQNEAQLDKSGLPSDRFNAER
 PEGSVSTLKIQRVQPEDSAVYLCASSSRWEQQFFGPGTRLTVD (SEQ ID
 NO: 30)

FIG. 7a

CAGAAAGAGGTGGAACAAAACAGCGGTCCGCTGAGCGTGCCGGAGGG
 TGAAAACGTTAGCATCAACTGCACCTACAGCGACCGTGTTAGCCAGAGC
 TTCTTTTGGTACCGTCAATATAGCGGTAAAAGCCCGGAGCTGATCATGAG
 CATTTATAGCAACGGTGACAAGGAAGATGGCCGTTTCACCGCGCAGCTG
 AACAAAGCGAGCCAATACGTGAGCCTGGAGATTCGTGACGTTTCAGCCG
 AGCGATAGCGCGACCTATCTGTGCGCGAGCCTGAAGGGTAACAACGATA
 TGCGTTTTTGGTGCGGGCACCCGTCTGACCGTGAAACCGGGTGGCGGTA
 GCGAGGGCGGTGGCAGCGAAGGTGGCGGTAGCGAGGGCGGTGGCAGC
 GAAGGTGGCACCGGTGGCGCGGGTGTGAGCCAGAGCCCGCGTTACCTG
 AGCGTGAAGCGTGGTCAAGACGTTACCCTGCGTTCGATCCGATCAGCG
 GCCACGTTAGCCTGTTCTGGTATCAGCAAGCGCCGGGTCAGGGTCCGGA
 GTTCCTGACCTATTTTCAGAACGAAGCGCAACTGGACAAGAGCGGTCTG
 CCGAGCGATCGTTTTAACGCGGAGCGTCCGGAAGGCAGCGTGAGCACC
 CTGAAAATTCAGCGTGTGCAACCGGAGGACAGCGCGGTTTATCTGTGCG
 CGAGCAGCAGCAGCCGTTGGGAACAGCAATTCTTTGGTCCGGGTACCC
 GCCTGACCGTTGAT (SEQ ID NO: 31)

FIG. 7b

QKEVEQNSGPLSVPEGENVSINCTYSDRVSQSFFWYRQYSGKSPELIMSIYS
 NGDKEDGRFTAQLNKASQYVSLEIRDVQPSDSATYLCASLKGNNDMRFGA
 GTRLTVKP (SEQ ID NO: 32)

FIG. 8a

CAGAAAGAGGTGGAACAAAACAGCGGTCCGCTGAGCGTGCCGGAGGG
TGAAAACGTTAGCATCAACTGCACCTACAGCGACCGTGTTAGCCAGAGC
TTCTTTTGGTACCGTCAATATAGCGGTAAAAGCCCGGAGCTGATCATGAG
CATTTATAGCAACGGTGACAAGGAAGATGGCCGTTTCACCGCGCAGCTG
AACAAAGCGAGCCAATACGTGAGCCTGGAGATTCGTGACGTTTCAGCCG
AGCGATAGCGCGACCTATCTGTGCGCGAGCCTGAAGGGTAACAACGATA
TGCGTTTTGGTGCGGGCACCCGTCTGACCGTGAAACCG (SEQ ID NO: 33)

FIG. 8b

GAGVSQSPRYLSVKRGQDVTLRCDPISGHVSLFWYQQAPGQGPEFLTYFQ
NEAQLDKSGLPSDRFNAERPEGSVSTLKIQRVQPEDSAVYLCASSSRWEQ
QFFGPGTRLTVD (SEQ ID NO: 34)

FIG. 9a

GGCGCGGGTGTGAGCCAGAGCCCGCGTTACCTGAGCGTGAAGCGTGGT
CAAGACGTTACCCTGCGTTGCGATCCGATCAGCGGCCACGTTAGCCTGT
TCTGGTATCAGCAAGCGCCGGGTCAGGGTCCGGAGTTCCTGACCTATTT
TCAGAACGAAGCGCAACTGGACAAGAGCGGTCTGCCGAGCGATCGTTT
TAACGCGGAGCGTCCGGAAGGCAGCGTGAGCACCTGAAAATTCAGCG
TGTGCAACCGGAGGACAGCGCGGTTTATCTGTGCGCGAGCAGCAGCAG
CCGTTGGGAACAGCAATTCTTTGGTCCGGGTACCCGCCTGACCGTTGAT
(SEQ ID NO: 35)

FIG. 9b

GGGSEGGGSEGGGSEGGGSEGGTG (SEQ ID NO: 36)

FIG. 10a

GGTGGCGGTAGCGAGGGCGGTGGCAGCGAAGGTGGCGGTAGCGAGGG
CGGTGGCAGCGAAGGTGGCACCGGT (SEQ ID NO: 37)

FIG. 10b

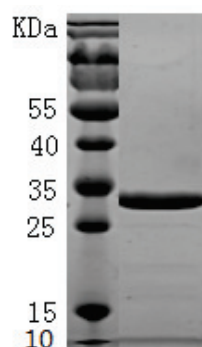


FIG. 11

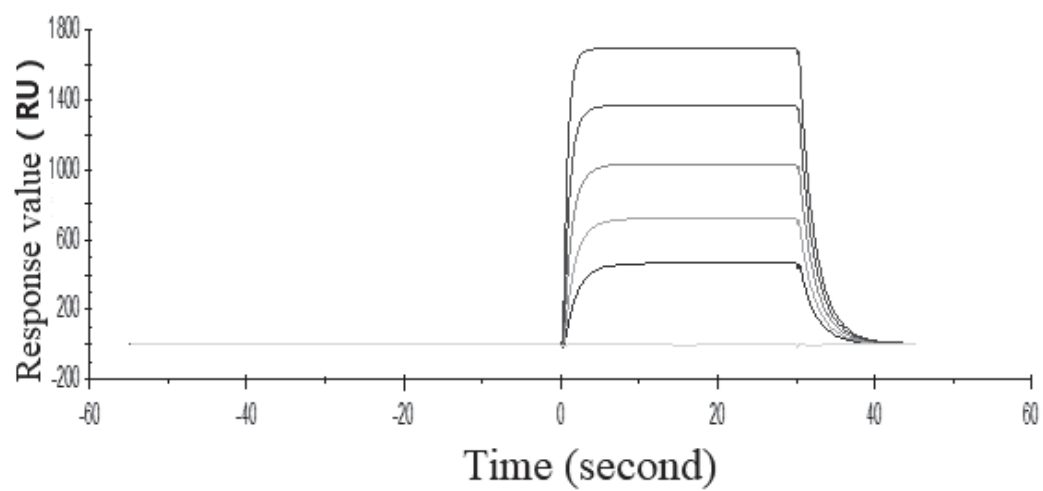


FIG. 12

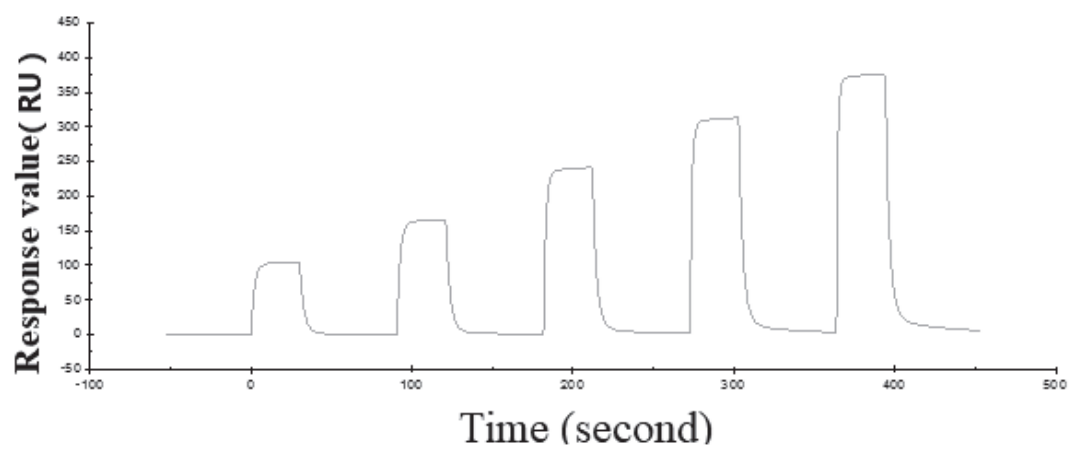


FIG. 13

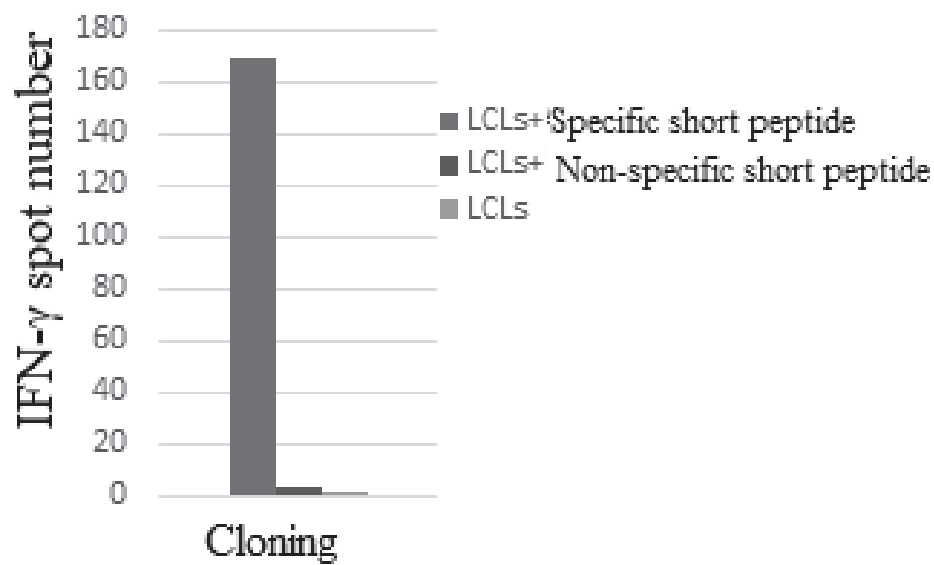


FIG. 14

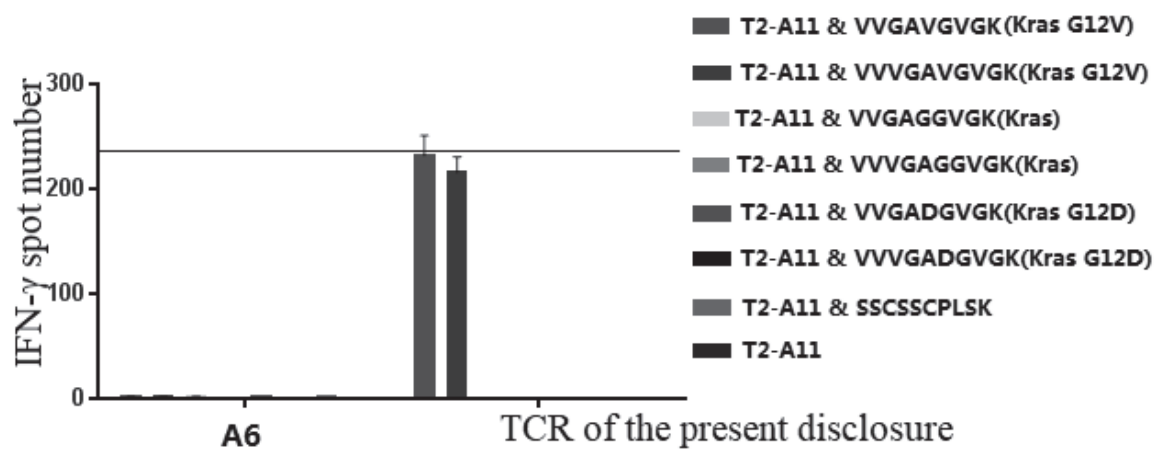


FIG. 15

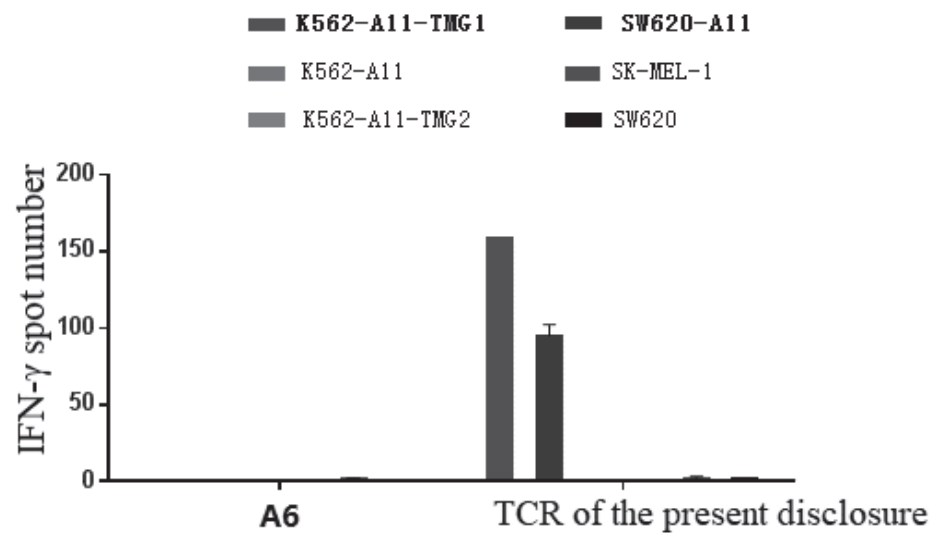


FIG. 16

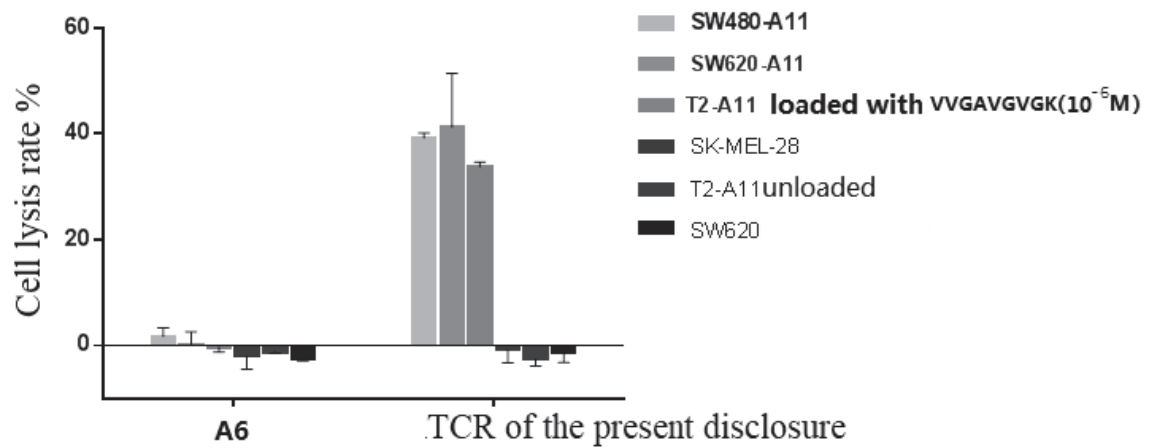


FIG. 17