

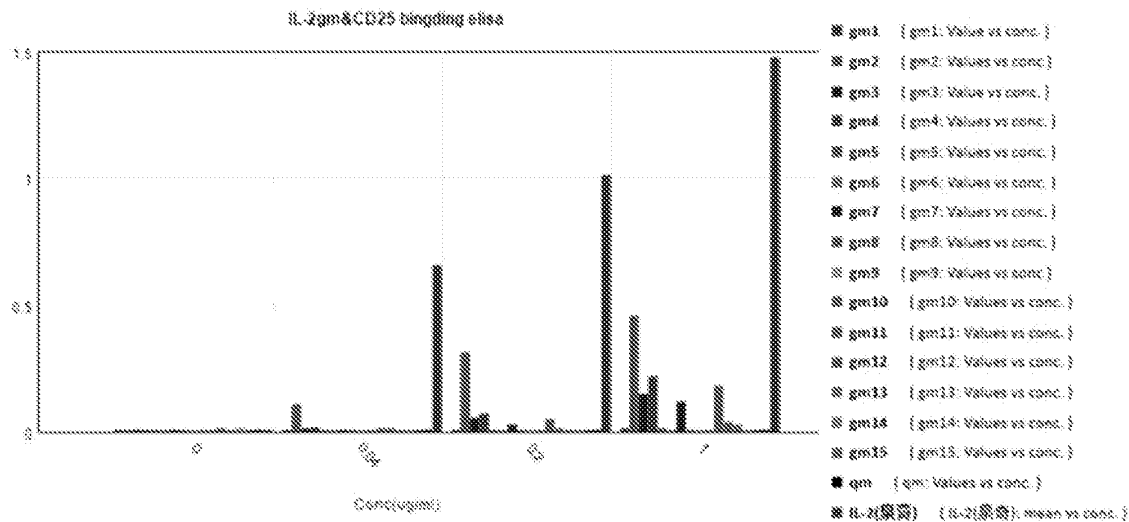


图 1

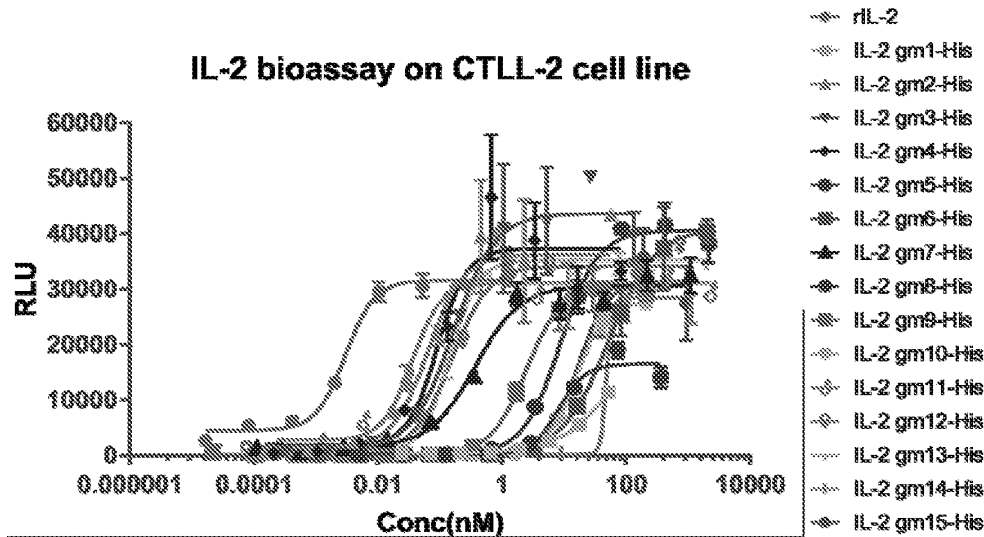


图 2

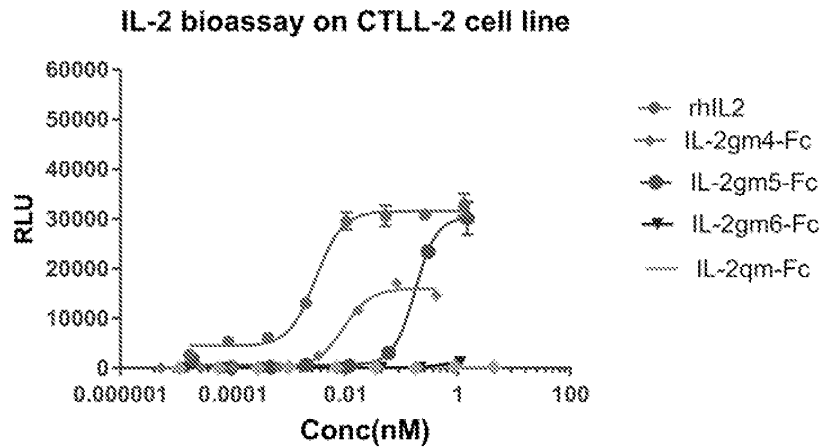


图 3

IL-2 bioassay on NK92 cell line

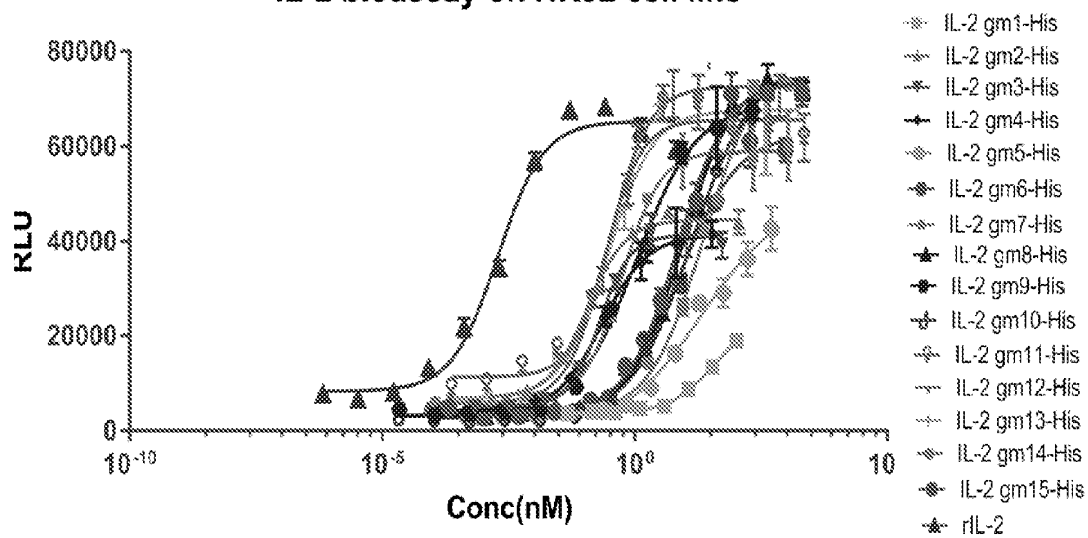


图 4

IL-2 bioassay on NK92 cell line

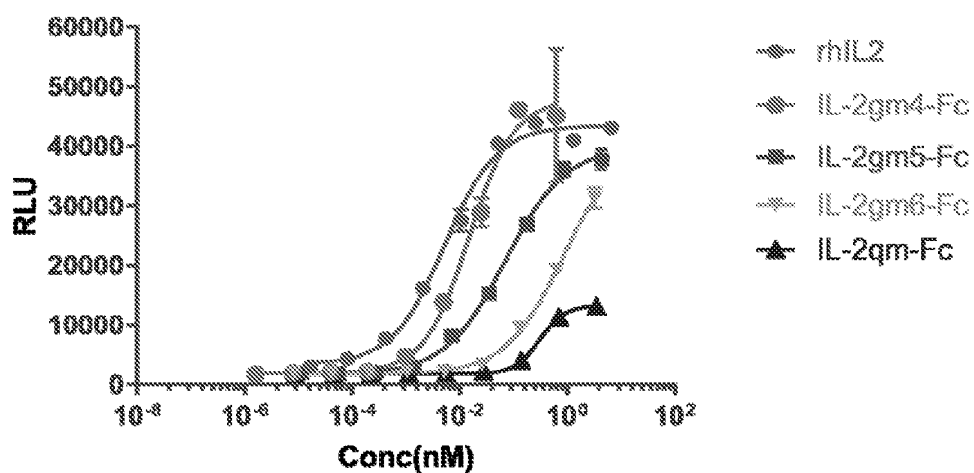


图 5

APASSSTKKTQLQLEHLLLDLQMILNGINNYKNPKL TRNL TFKFYMPKK
 ATELKHLQCLEEELKPLEEVNLNAQSKNFHLRPRDLISNINVIVLELKGSETTF
 MCEYADETATIVEFLNRWITFAQSIISTLTTHHHHHH

图 6a

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRNL TFKFYMPKK
 ATELKHLQCLEEEL KPLEEVLNLAQSKNFHLRPRDLISNINVIVLEL KGSETTF
 MCEY ADETATIVEFLNRWITFAQSIISTL TDAHKSEVAHRFKDLGEENFKALV
 LIAFAQYLQQCPFEDHV KLVNEVTEFAKTCV ADESAENCDKSLHTLFGDKLC
 TVATLRETYGEMADCCAKQEPERNECFLQHKDDNPNLPRLVRPEVDVMCTA
 FHDNEETFLKKYLYEIAARRHPYFYAPEL LFFAKRYKAAFTECCQAADKAACL
 LPKLDEL RDEGKASSAKQRLK CASLQKFGERAFKAWAVARL SQRFPKAEFA
 EVSKLV TDLTKVHTECCHGDLLECADDRADL AKYICENQDSISSKLKECCEK
 PLLEKSHCIAEVENDEMPADLP SLAADFVESKDVCKNYAEAKDVFLGMFLY
 EYARRHPDY SVVLLLRLAKTYETTLEKCCAAADPHECYAKVFDEFKPLVEEP
 QNLKQNCELFEQLGEYKFQNALLVRYTKKVPQVSTPTLVEVSRNLGKVGSK
 CCKHPEAKRMPCAEDYLSVVNLQLCVLHEKTPVSDRVTKCCTESLVNREPC
 FSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT
 KEQLKAVMDDFAAFVEKCKADDKETCFAEEGKKLV AASQAALGL

图 6b

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRMLTFKFYMPKN
 ATELKHLQCLEEEL KPLEEVLNLAQSKNFHLRPRDLISNINVIVLEL KGSETTF
 MCEY ADETATIVEFLNRWITFAQSIISTL THHHHHH

图 6c

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRMLTFKFYMPKK
 ATELKHLQCLEEEL KPLEEVLNLTQSKNFHLRPRDLISNINVIVLEL KGSETTF
 MCEY ADETATIVEFLNRWITFAQSIISTL THHHHHH

图 6d

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRMLTFKFYMPKK
 ATELKHLQCLEEEL KPLEEVLNLSQSKNFHLRPRDLISNINVIVLEL KGSETTF
 MCEY ADETATIVEFLNRWITFAQSIISTL THHHHHH

图 6e

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRMLTFKFYMPKK
 ATELKHLQCLEEEL KPLEEVLNLAQSKNFHLRPRDLISNINVIVLEL KGSETTF
 MCEY ANETATIVEFLNRWITFAQSIISTL THHHHHH

图 6f

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRNL TFKFYMPKN
 ATELKHLQCLEEEL KPLEEVLNLAQSKNFHLRPRDLISNINVIVLEL KGSETTF
 MCEY ADETATIVEFLNRWITFAQSIISTL THHHHHH

图 6g

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRMLTFKFYMPKN
 ATELKHLQCLEEEL KPLEEVLNLTQSKNFHLRPRDLISNINVIVLEL KGSETTF
 MCEY ADETATIVEFLNRWITFAQSIISTL THHHHHH

图 6h

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRMLTFKFYMPKN
 ATELKHLQCLEEEELKPLEEVLNLTQSKNFHLRPRDLISNINVIVLELKGSETTF
 MCEY ADETATIVEFLNRWITFAQSIISTLTGGGSGGGSGGGSGGGSEPKSSDK
 THTSPSPAPELEGGSSVFLFPPKPKDTLMISRTPETCVVVDVSHEDPEVKFN
 WYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKAYACAVSN
 KALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIA
 VEWE SNGQPENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFCFSVMH
 EALHNHYTQKSLSLSPGK*

注：GGGSGGGSGGGSGGGSG为linker

图 6i

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRNLTFKFYMPKK
 ATELKHLQCLEEEELKPLEEVLNLTQSKNFHLRPRDLISNINVIVLELKGSETTF
 MCEY ADETATIVEFLNRWITFAQSIISTLTHHHHHH

图 6j

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRNLTFKFYMPKK
 ATELKHLQCLEEEELKPLEEVLNLAQSKNFHLRPRDLISNINVIVLELKGSETTF
 MCEY ANETATIVEFLNRWITFAQSIISTLTHHHHHH

图 6k

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRMLTFKFYMPKN
 ATELKHLQCLEEEELKPLEEVLNLAQSKNFHLRPRDLISNINVIVLELKGSETTF
 MCEY ANETATIVEFLNRWITFAQSIISTLTHHHHHH

图 6l

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRMLTFKFYMPKK
 ATELKHLQCLEEEELKPLEEVLNLTQSKNFHLRPRDLISNINVIVLELKGSETTF
 MCEY ANETATIVEFLNRWITFAQSIISTLTHHHHHH

图 6m

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRNLTFKFYMPKN
 ATELKHLQCLEEEELKPLEEVLNLTQSKNFHLRPRDLISNINVIVLELKGSETTF
 MCEY ADETATIVEFLNRWITFAQSIISTLTHHHHHH

图 6n

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRNLTFKFYMPKN
 ATELKHLQCLEEEELKPLEEVLNLTQSKNFHLRPRDLISNINVIVLELKGSETTF
 MCEY ADETATIVEFLNRWITFAQSIISTLTSPKSSDKTHTSPSPAPELEGGSSV
 FLFPPKPKDTLMISRTPETCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKP
 REEQYASTYRVVSVLTVLHQDWLNGKAYACAVSNKALPAPIEKTISKAKGQ
 PREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWE SNGQPENNYKTT
 PPVLDSDGSFFLYSKLTVDKSRWQQGNVFCFSVMHEALHNHYTQKSLSLSPG
 K

图 6o

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRMLTFKFYMPKN
ATELKHLQCLEEELKPLEEVLNLTQSKNFHLRPRDLISNINVIVLELKGSETTF
MCEYANETATIVEFLNRWITFAQSIISTLTTHHHHHH

图 6p

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRNLTFKFYMPKK
ATELKHLQCLEEELKPLEEVLNLTQSKNFHLRPRDLISNINVIVLELKGSETTF
MCEYANETATIVEFLNRWITFAQSIISTLTTHHHHHH

图 6q

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRNLTFKFYMPKN
ATELKHLQCLEEELKPLEEVLNLAQSKNFHLRPRDLISNINVIVLELKGSETTF
MCEYANETATIVEFLNRWITFAQSIISTLTTHHHHHH

图 6r

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRNLTFKFYMPKN
ATELKHLQCLEEELKPLEEVLNLTQSKNFHLRPRDLISNINVIVLELKGSETTF
MCEYANETATIVEFLNRWITFAQSIISTLTTHHHHHH

图 6s

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRNLTFKFYMPKN
ATELKHLQCLEEELKPLEEVLNLTQSKNFHLRPRDLISNINVIVLELKGSETTF
MCEYANETATIVEFLNRWITFAQSIISTLTPEKSSDKTHTSPSPAPELEGGSSV
FLFPPKPKDTLMISRTEPVTCTVVVDVSHE DPEVKFNWYVDGVEVHNAKTKP
REEQYASTYRVVSVLTVLHQDWLNGKAYACAVSNKALPAPIEKTISKAKGQ
PREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTT
PPVLDSDGSFFLYSKLTVDKSRWQQGNV FSCSV MHEALHNHYTQKSLSLSPG
K

图 6t

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRNLTFKFYMPKN
ATELKHLQCLEEELKPLEEVLNLTQSKNFHLRPRDLISNINVIVLELKGSETTF
MCEYANETATIVEFLNRWITFAQSIISTLTDAHKSEVAHRFKDLGEENFKALV
LIAFAQYLQQCFEDHVKL VNEVTEFAKTCVADESAENCDKSLHTLFGDKLC
TVATLRETYGEMADCCAKQEPERNECFLQHKDDNPPLRLVRPEVDVMCTA
FHDNEETFLKKYLYEIARRHPYFYAPELFFAKRYKAAFTECCQAADKAACL
LPKLDEL RDEGKASSAKQRLKCA SLQKFGE RAFKAWAVARL SQRFPKAEFA
EVSKLVTDLT KVHTECCHGDLLECADDRADLAKYICENQDSISSKLKECCEK
P LLEKSHCIAEVENDEMPADLP SLAADFVESKDVCKNYAEAKDVFLGMFLY
EYARRHPDY SVVLLLRLAKTYETTLEKCCAAADPHECYAKVFDEFKPLVEEP
QNL IKQNCELFEQLGEYKFQNALLVRYTKKVQVSTPTLVEVSRNLGKVGSK
CCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCTESLVNRRPC
FSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKPKAT
KEQLKAVMDDFAAFVEKCKKADDKETCFAEEGKKLV AASQAALGL

图 6u

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRMLTAKFAMPK
 KATELKHL QCLEEELKPLEEVLNGAQSKNFHLRPRDLISNINVIVLELKGSET
 TFMCEYADETATIVEFLNRWITFAQSHSTL TEPKSSDKTHTSPPSPAPELEGGG
 SVFLFPPKPKD TLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKT
 KPREEQYASTYRVVSVLTVLHQDWLNGKAYACAVSNKALPAPIEKTISKAK
 GQPREPQVYTLPPSREEMTKNQVSLTCL VKGFYPSDIAVEWESNGQPENNYK
 TTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSL
 PGK

图 6v

ELCDDDPPEIPHATFKAMAYKEGTMLNCECKRGFRRIKSGSLYMLCTG
 NSSHSSWDNQCCQCTSSATRNITTKQVTPQPEEQKERKTTEMQSPMQPVDAQS
 LPGHCREPPWENEATERIYHFVVGQMVYYQCVQGYRALHRGPAESVCKM
 THGKTRWTQPOLICTGEMETSQFPGEKPKQASPEGRPESETSCLVTTTDFQIQ
 TE MAATMETSIF TTEYQGGGSGGGSGGGSGGGSGEPKSSDKTHTSPPSPAPELL
 GGGSVFLFPPKPKD TLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHN
 AKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISK
 AKGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENN
 YKTTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSL
 SLSPGK

注: GGGSGGGSGGGSGGGSG为linker

图 6w

GGGSGGGSGGGSGGGSG

图 6x

MGWSCIILFLVATATGVHS

图 6y

IL-2-gm1-HSA (SEQ ID NO: 26)

APASSSTKKTQLQLEHLLL DL QMILNGINNYKNPKL TRNLTFKFYMPKKATELKHL
 QCLEEELKPLEEVLNLAQSKNFHLRPRDLISNINVIVLELKGSETTFMCEYADETATI
 VEFLNRWITFAQSHSTLTAAADAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCP
 FEDHVKL VNEVTEFAKTCVADESAENCDSLHTLFGDKLCTVATLRETYGEMAD
 CCAKQEPERNECFLQHKDDNP NL PRLVRPEVDVMCTAFHDNEETFLKKYLYEIAR
 RHPYFYAPELLFFAKRYKAAFTCCQAADKAACLLPKLDEL RDEGKASSAKQRLK
 CASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTKVHTECCHGDLLECA
 DDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPADLPSLAADFV
 ESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVLLLLRLAKTYETTLEKCCAAA
 DPHECYAKVFDEFKPLVEEPQNLIKQNCLEFQELGEYKFQNALLVRYTKKVPQVST
 PTLVEVSRNLGKVGSKCKKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTK
 CCTESLVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVEL
 VKHKPKATKEQLKAVMDDFAAFVEKCKADDKETCFAEEGKKLVAASQAALGL

图 7a

IL-2-gm4-HSA (SEQ ID NO: 27)

APASSSTKKTQLQLEHLLLDLQMILNGINNYKNPKLTRMLTFKFYMPKNATELKH
LQCLEEELKPLEEVLNLTQSKNFHLRPRDLISNINVIVLELKGSETTFMCEYADETA
TIVEFLNRWITFAQSIISTLTAAADAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQ
CPFEDHVKL VNEVTEFAKTCVADESAENCDKSLHTLFGDKLCTVATLRETYGEMA
DCCAKQEPERNECFLQHKDDNPNLPRLVRPEVDVMCTAFHDNEETFLKKYLYEIA
RRHPYFYAPELLFFAKRYKAAFTTECCQAADKAAACLLPKLDEL RDEGKASSAKQRL
KCA SLQKFGERAFAKAWAVARLSQRFPKAEFAEVSKLVTDLT KVHTECCHGDLLEC
ADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPADLPSLAADF
VESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLRLAKTYETTLEKCCAA
ADPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQV
STPTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRV
TKCCTESLVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALV
ELVKHKPKATKEQLKAVMDDFAAFVEKCKADDKETCFAEEGKKLVAASQAAL
GL

图 7b

IL-2-gm6-HSA (SEQ ID NO: 28)

APASSSTKKTQLQLEHLLLDLQMILNGINNYKNPKLTRNLTFKFYMPKNATELKHL
QCLEEELKPLEEVLNLTQSKNFHLRPRDLISNINVIVLELKGSETTFMCEYANETATI
VEFLNRWITFAQSIISTLTAAADAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCP
FEDHVKL VNEVTEFAKTCVADESAENCDKSLHTLFGDKLCTVATLRETYGEMAD
CCAKQEPERNECFLQHKDDNPNLPRLVRPEVDVMCTAFHDNEETFLKKYLYEIA
RHPYFYAPELLFFAKRYKAAFTTECCQAADKAAACLLPKLDEL RDEGKASSAKQRLK
CASLQKFGERAFAKAWAVARLSQRFPKAEFAEVSKLVTDLT KVHTECCHGDLLECA
DDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPADLPSLAADFV
ESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLRLAKTYETTLEKCCAAA
DPHECYAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVST
PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTK
CCTESLVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVEL
VKHKPKATKEQLKAVMDDFAAFVEKCKADDKETCFAEEGKKLVAASQAALGL

图 7c

IL-2-gm7-HSA (SEQ ID NO: 29)

APASSSTKKTQLQLEHLLLDLQMILNGINNYKNPKLTRMLTFKFYMPKKATELKHL
QCLEEELKPLEEVLNLAQSKNFHLRPRDLISNINVIVLELKGSETTFMCEYANETATI
VEFLNRWITFAQSIISTLTAAADAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCP
FEDHVKL VNEVTEFAKTCVADESAENCDKSLHTLFGDKLCTVATLRETYGEMADC
CAKQEPERNECFLQHKDDNPNLPRLVRPEVDVMCTAFHDNEETFLKKYLYEIAARRH
PYFYAPELLFFAKRYKAAFTTECCQAADKAAACLLPKLDEL RDEGKASSAKQRLKCAS
LQKFGERAFAKAWAVARLSQRFPKAEFAEVSKLVTDLT KVHTECCHGDLLECADDR
ADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPADLPSLAADFVESKD
VCKNYAEAKDVFLGMFLYEYARRHPDYSVVLRLAKTYETTLEKCCAAADPHEC
YAKVFDEFKPLVEEPQNLIKQNCELFEQLGEYKFQNALLVRYTKKVPQVSTPTLVE
VSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTKCCTES
LVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVELVKHKP
KATKEQLKAVMDDFAAFVEKCKADDKETCFAEEGKKLVAASQAALGL

图 7d

野生型 IL-2-HSA (SEQ ID NO: 30)

APASSSTKKTQLQLEHLLLDLQMLNGINNYKNPKLTRMLTFKFYMPKKATELKH
LQCLEEELKPLEEVLNLAQSKNFHLRPRDLISNINVIVLELKGSETTFMCEYADETA
TIVEFLNRWITFAQSIISTLTAAADAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQ
CPFEDHVKL VNEVTEFAKTCVADESAENCDKSLHTLFGDKLCTVATLRETYGEMA
DCCAKQEPERNECF LQHKDDNP NLPRLVRPEVDVMCTAFHDNEETFLKKYLYEIA
RRHPYFYAPELLFFAKRYKAAFTTECCQAADKAAACLLPKLDEL RDEGKASSAKQRL
KCASLQKFGERAFAKAWAVARLSQRFPKAEFAEVSKL VTDLT KVHTECCHGDLLEC
ADDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPADLPSLAADF
VESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVLLRLAKTYETTLEKCCAA
ADPHECYAKVFDEFKPLVEEPQNLIKQNCLEFEQLGEYKFQNALLVRYTKKVPQV
STPTLVEVSRNLGKVGSKCKKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRV
TKCCTESLVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALV
ELVKHKPKATKEQLKAVMDDFAAFVEKCKADDKETCFAEEGKKLVAASQAAL
GL

图 7e

IL-2R α (SEQ ID NO: 31)

MEPRLLMLGFLSLTIVPSCRAELCLYDPPEVPNATFKALSYKNGTILNCECKRGFRR
LKELVYMRCLGNSWSSNCQCTSNSHDKSRKQVTAQLEHQKEQQT TTD MQKPTQS
MHQENLTGHCREPPPWKHEDSKRIYHFVEGQSVHYECIPGYKALQRGPAISICKMK
CGKTGWTQPQLTCVDEREHHRFLASEESQGSRNSSPESETSCPITTTDFPQPTETTA
MTETFVLTMEYKDDDDKSGGGGSHHHHHH

图 7f

IL-2R β (SEQ ID NO: 32)

MGWSCILFLVATATGVHSASEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKD
TLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYR
VVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSR
DELTKNQVSLWCLVKGFYPSDIAVEWESNGQPENNYKTTPVLDS DGSFFLYS
KLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGSGGGGSDDDDKAVN
GTSQFTCFYN SRANISCVWSQD GALQDTSCQVHAWPD RRRRNQTCELLPV SQ
ASWACNLILGAPDSQKLTTVDIVTLRVLCREGVRWRVMAIQDFKPFENLRLMA
PISLQVVHVETHRCNISWEISQASHYFERHLEFEARTLSPGHTWEEAPLLTLKQK
QEWICLETLTPDTQYEFQVRVKPLQGEFTTWSPWSQPLAFRTKPAALGKDT

图 7g

IL-2R γ (SEQ ID NO: 33)

MGWSCILFLVATATGVHSASEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKD
TLMISRTPEVTCVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYR
VVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSR
DELTKNQVSLSCAVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLVSK
LTVDKSRWQQGNVFCFSVMHEALHNHYTQKSLSLSPGSGGGGSDDDDKLNTTI
LTPNGNEDTTADFFLTMTPTDSLSVSTLPLPEVQCFVFNVEYMNCTWNSSEPQ
PTNLTLYHYWYKNSDNDKVQKCSHYLFSEEITSGCQLQKKEIHL YQTFVVLQD
PREPRRQATQMLKLQNLVIPWAPENLT LHKLSSESQLELNWNNRFLNHCLEHLV
QYRTDWDHSWTEQSVDYRHKFSLPSVDGQKRYTFRVRSRFPNPLCGSAQHWSE
WSHPIHWGSNTSKENPFLFALEA

图 7h

IL-2-gm1a-HSA (SEQ ID NO: 34)

APASSSTKKTQLQLEHLLLDLQMILNGINNYKNPKLTRDLTFKFYMPKKATELKHL
QCLEEELKPLEEVLNLAQSKNFHLRPRDLISNINVIVLELKGSETTFMCEYADETATI
VEFLNRWITFAQSIISTLTAAADAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCP
FEDHVKL VNEVTEFAKTCVADESAENCDKSLHTLFGDKLCTVATLRETYGEMAD
CCAQKQEPERNECF LQHKDDNP NLPRLVRPEVDVMCTAFHDNEETFLKKYL YEIAR
RHPYFYAPELLFFAKRYKAAFTTECCQAADKAACLLPKLDEL RDEGKASSAKQRLK
CASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLT KVHTECCHGDLLECA
DDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPADLP SLAADFV
ESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVL LRLAKTYETTLEKCCAAA
DPHECYAKVFDEFKPLVEEPQNLIKQNC ELFQ LGEYKFQNAL L VRYTKKVPQVST
PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTK
CCTESLVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVEL
VKHKPKATKEQLKAVMDDFAAFVEKCKADDKETCFAEEGKKLV AASQAALGL

图 7i

IL-2-gm1b-HSA (SEQ ID NO:35)

APASSSTKKTQLQLEHLLLDLQMILNGINNYKNPKLTRELTFKFYMPKKATELKHL
QCLEEELKPLEEVLNLAQSKNFHLRPRDLISNINVIVLELKGSETTFMCEYADETATI
VEFLNRWITFAQSIISTLTAAADAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCP
FEDHVKL VNEVTEFAKTCVADESAENCDKSLHTLFGDKLCTVATLRETYGEMAD
CCAQKQEPERNECF LQHKDDNP NLPRLVRPEVDVMCTAFHDNEETFLKKYL YEIAR
RHPYFYAPELLFFAKRYKAAFTTECCQAADKAACLLPKLDEL RDEGKASSAKQRLK
CASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLT KVHTECCHGDLLECA
DDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPADLP SLAADFV
ESKDVCKNYAEAKDVFLGMFLYEYARRHPDYSVVL LRLAKTYETTLEKCCAAA
DPHECYAKVFDEFKPLVEEPQNLIKQNC ELFQ LGEYKFQNAL L VRYTKKVPQVST
PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTK
CCTESLVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVEL
VKHKPKATKEQLKAVMDDFAAFVEKCKADDKETCFAEEGKKLV AASQAALGL

图 7j

IL-2-gm1c-HSA (SEQ ID NO: 36)

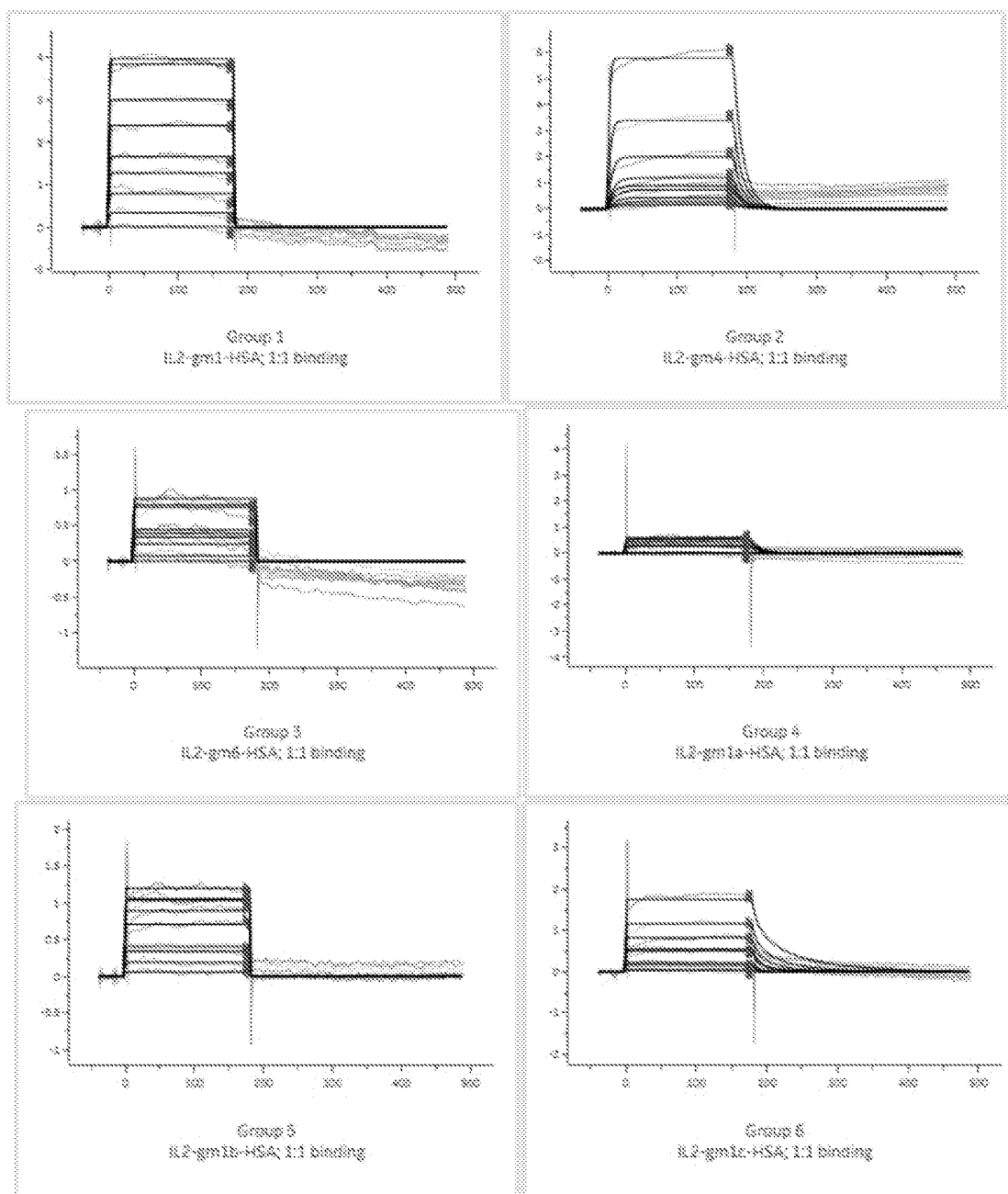
APASSSTKKTQLQLEHLLLDLQMILNGINNYKNPKLTRQLTFKFYMPKKATELKHL
QCLEEEELKPLEEVLNLAQSKNFHLRPRDLISNINVIVLELKGSETTFMCEYADETATI
VEFLNRWITFAQSIISTLTAAADAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCP
FEDHVKLVNEVTEFAKTCVADESAENCDSLHTLFGDKLCTVATLRETYGEMAD
CCAKQEPERNECFLQHKDDNPPLRLVRPEVDVMCTAFHDNEETFLKKYLYEIR
RHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLPKLDELDEGKASSAKQRLK
CASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTKEVHTECCHGDLLECA
DDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPADLPSLAADFV
ESKDVCCKNYAEAKDVFLGMFLYEYARRHPDYSVVLRLAKTYETTLEKCCAAA
DPHECYAKVFDEFKPLVEEPQNLIKQNCLEFEQLGEYKFQNALLVRYTKKVPQVST
PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTK
CCTESLVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVEL
VKHKPKATKEQLKAVMDDFAAFVEKCKCKADDKETCFAEEGKKLVAASQAALGL

图 7k

IL-2-gm1d-HSA (SEQ ID NO: 37)

APASSSTKKTQLQLEHLLLDLQMILNGINNYKNPKLTRALTFKFYMPKKATELKHL
QCLEEEELKPLEEVLNLAQSKNFHLRPRDLISNINVIVLELKGSETTFMCEYADETATI
VEFLNRWITFAQSIISTLTAAADAHKSEVAHRFKDLGEENFKALVLIAFAQYLQQCP
FEDHVKLVNEVTEFAKTCVADESAENCDSLHTLFGDKLCTVATLRETYGEMAD
CCAKQEPERNECFLQHKDDNPPLRLVRPEVDVMCTAFHDNEETFLKKYLYEIR
RHPYFYAPELLFFAKRYKAAFTECCQAADKAACLLPKLDELDEGKASSAKQRLK
CASLQKFGERAFKAWAVARLSQRFPKAEFAEVSKLVTDLTKEVHTECCHGDLLECA
DDRADLAKYICENQDSISSKLKECCEKPLLEKSHCIAEVENDEMPADLPSLAADFV
ESKDVCCKNYAEAKDVFLGMFLYEYARRHPDYSVVLRLAKTYETTLEKCCAAA
DPHECYAKVFDEFKPLVEEPQNLIKQNCLEFEQLGEYKFQNALLVRYTKKVPQVST
PTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVVLNQLCVLHEKTPVSDRVTK
CCTESLVNRRPCFSALEVDETYVPKEFNAETFTFHADICTLSEKERQIKKQTALVEL
VKHKPKATKEQLKAVMDDFAAFVEKCKCKADDKETCFAEEGKKLVAASQAALGL

图 7l



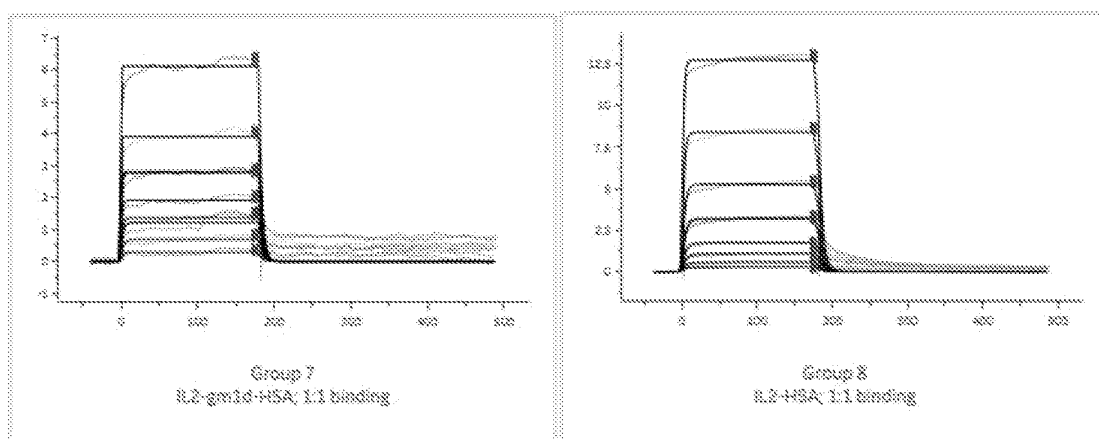
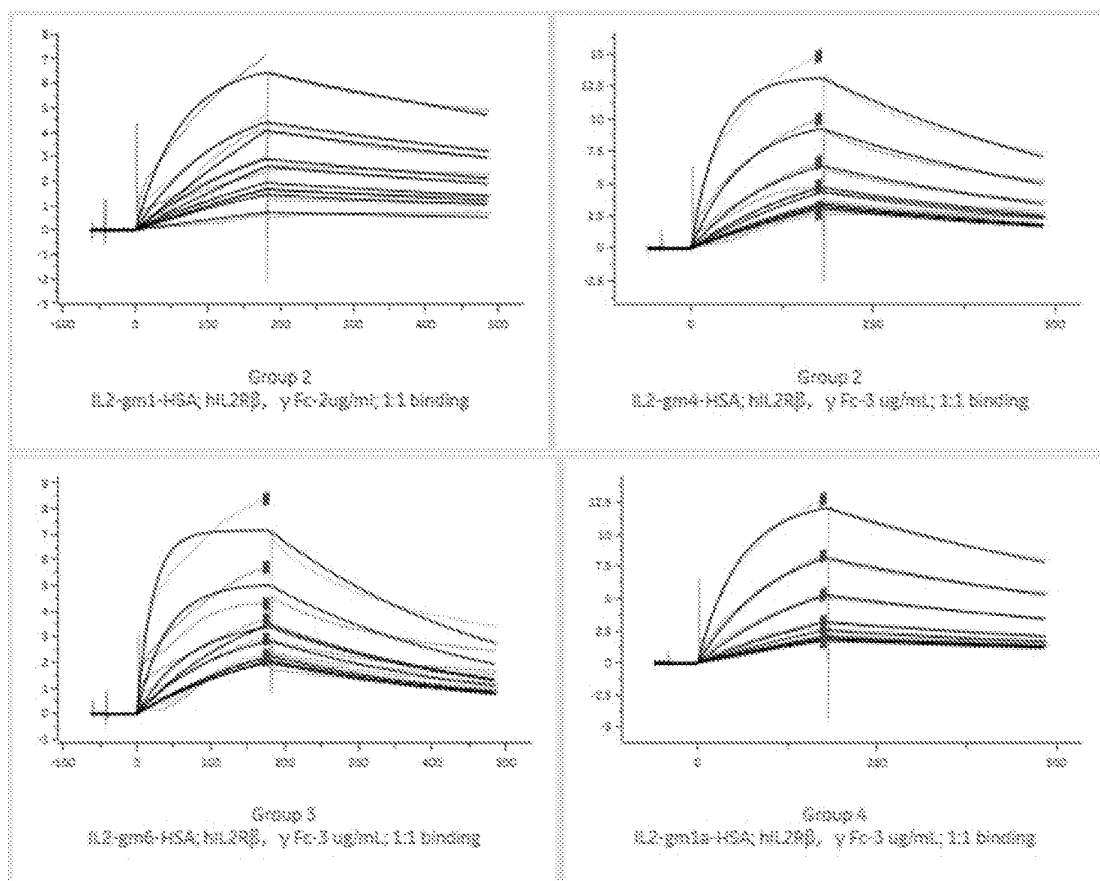


图 8A



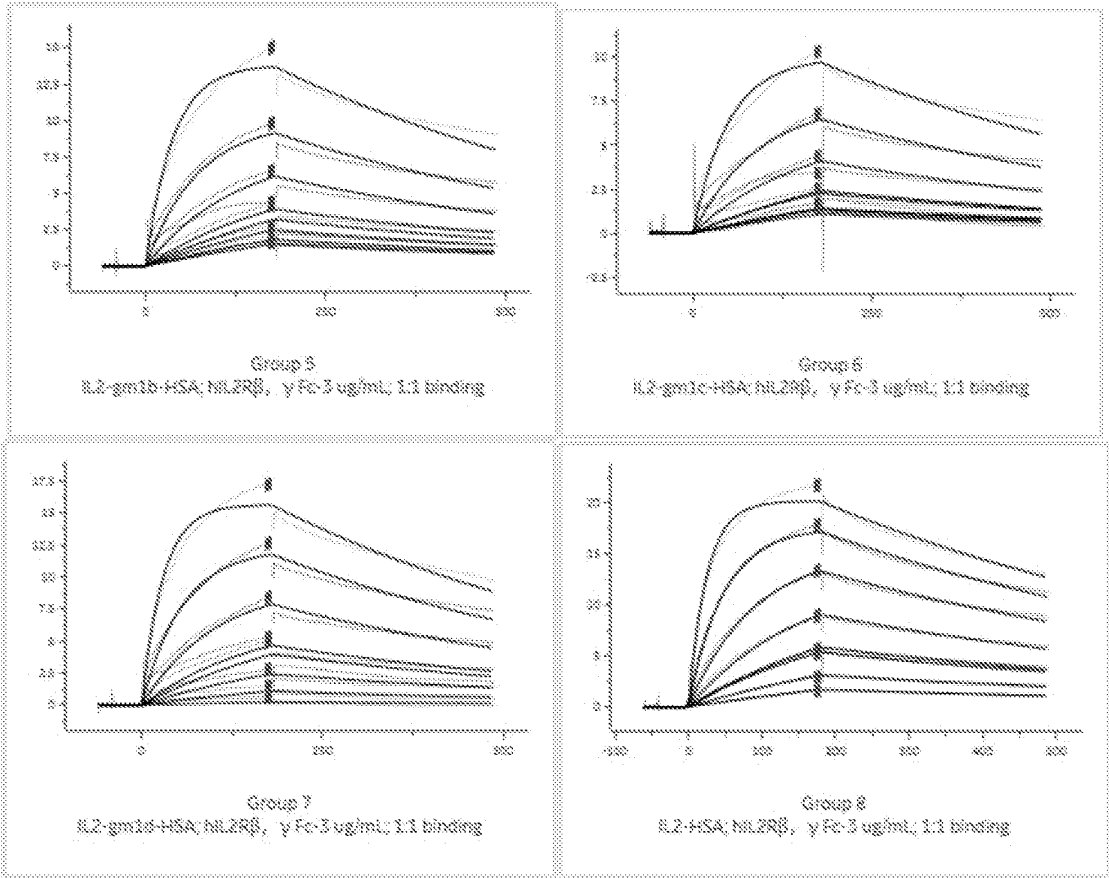


图 8B

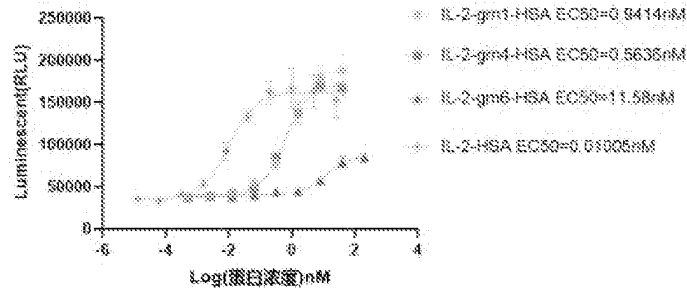


图 9

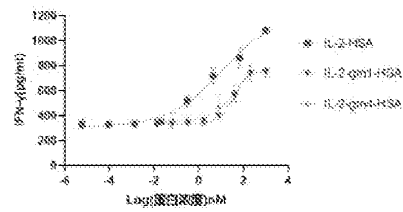


图 10A

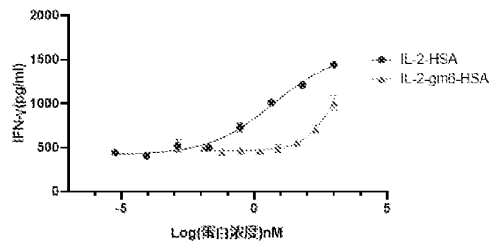


图 10B

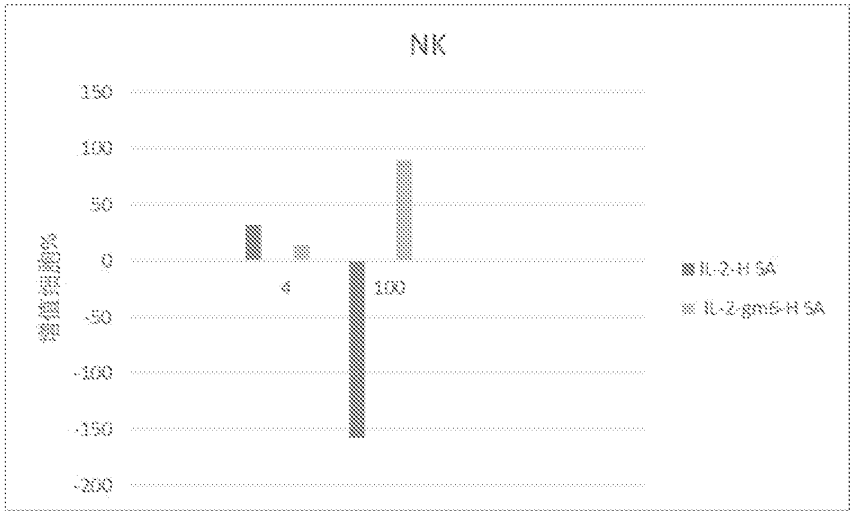


图 11A



图 11B

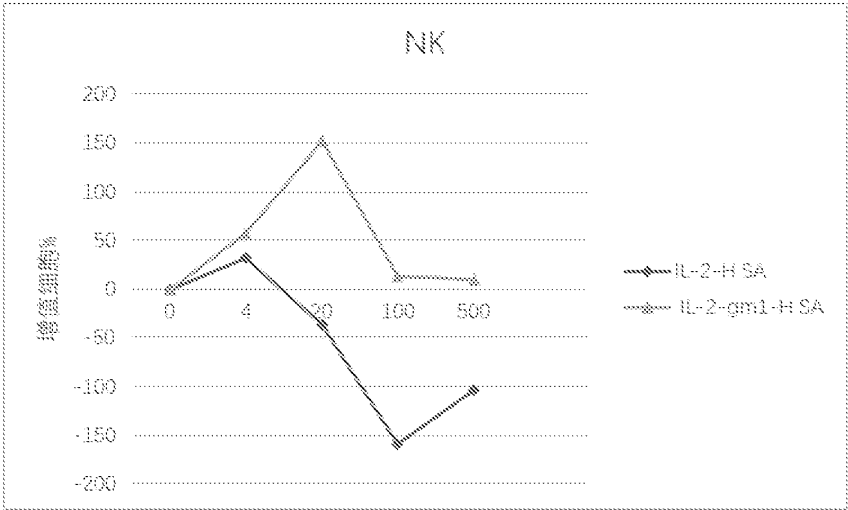


图 12A

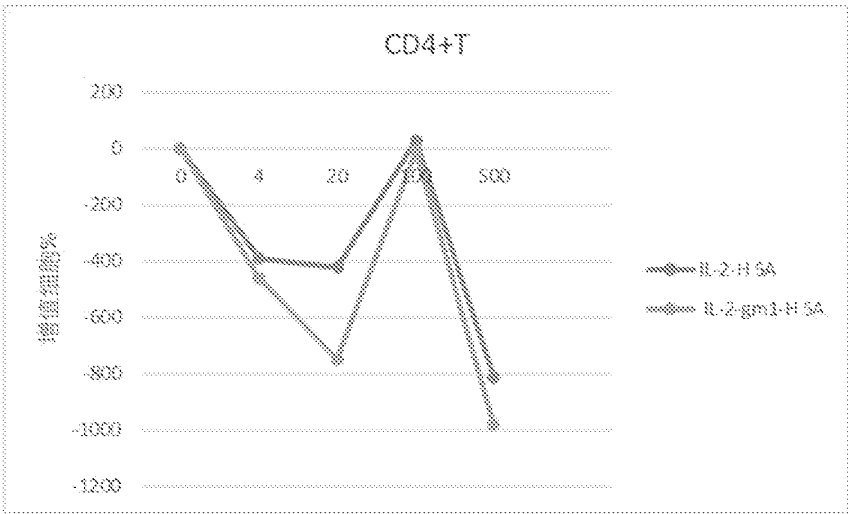


图 12B