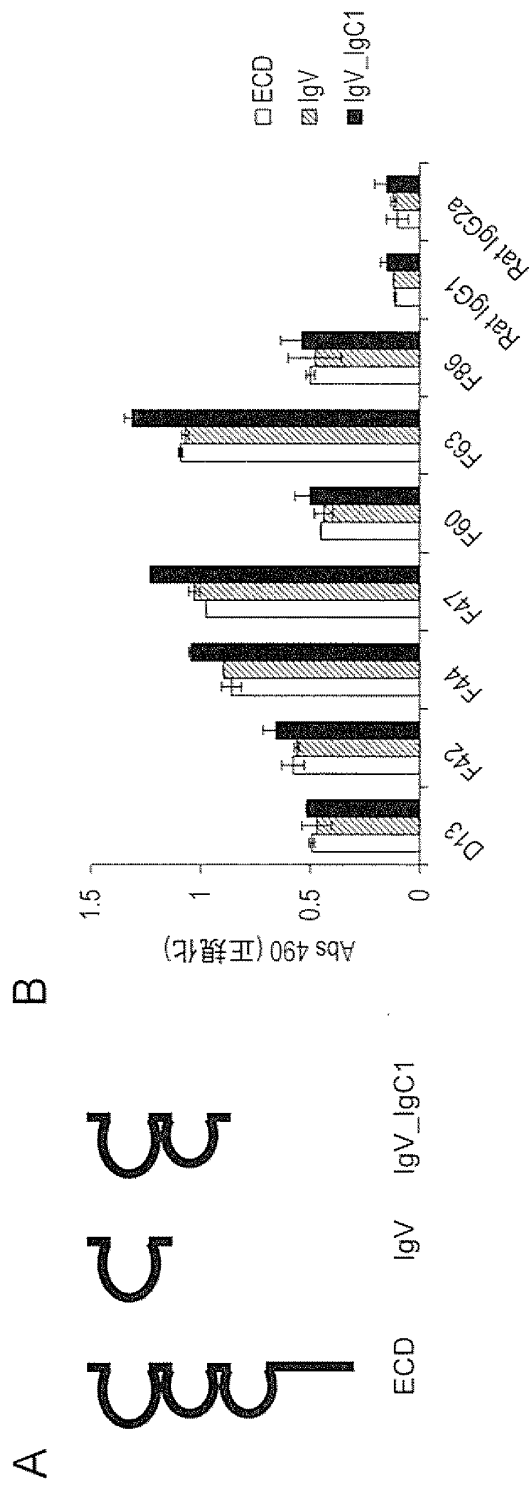
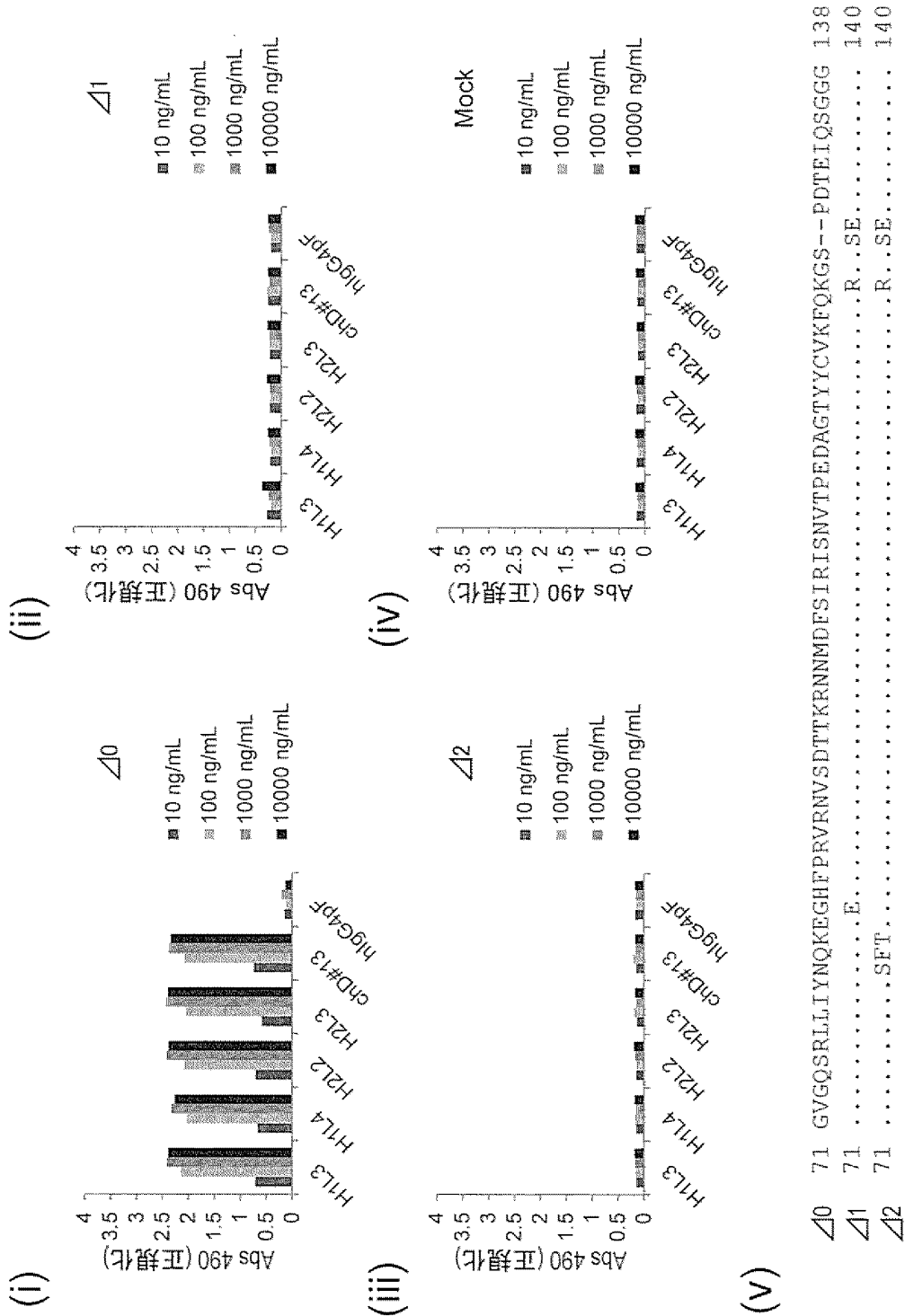


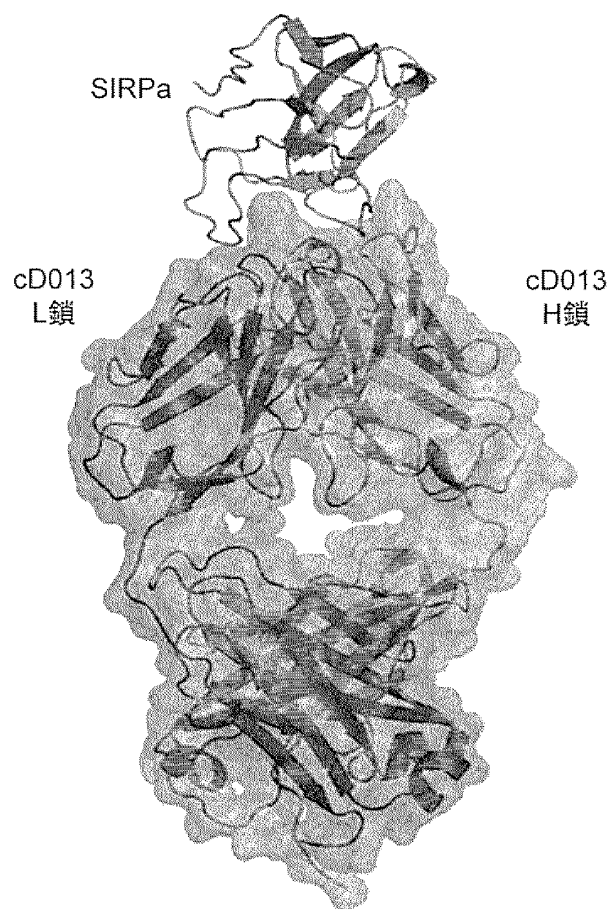
[図1A]



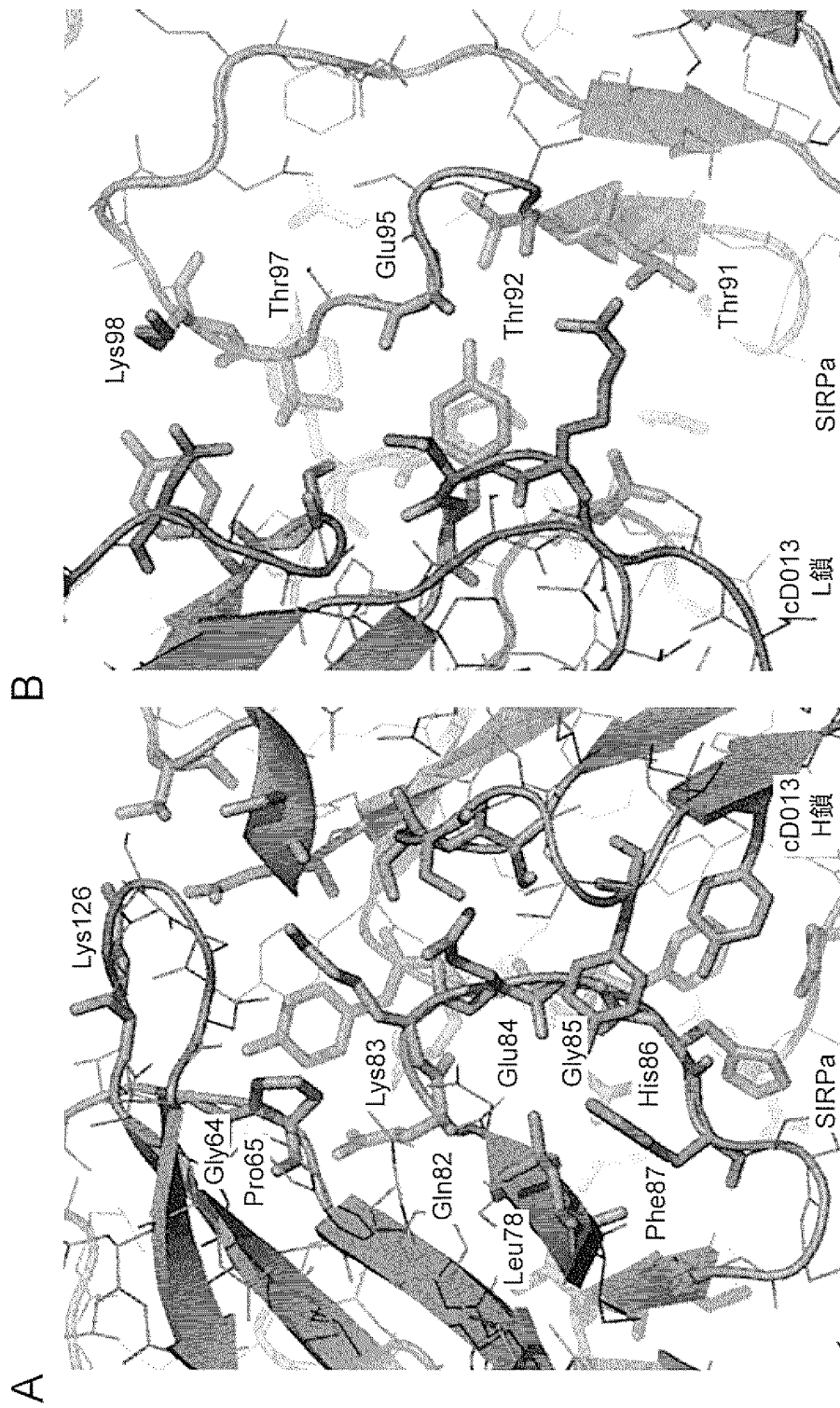
[図1B]



[図2]



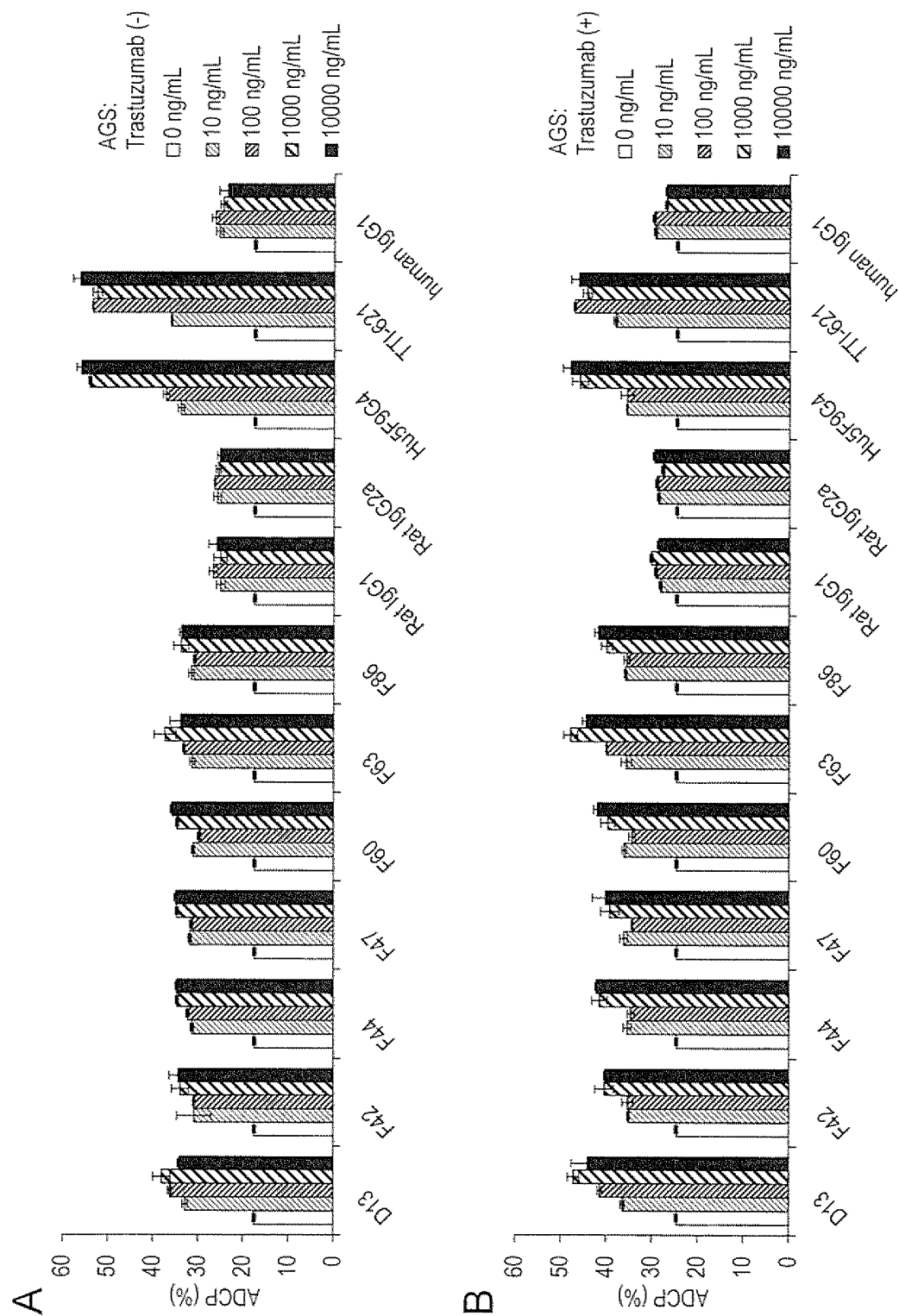
[図3]



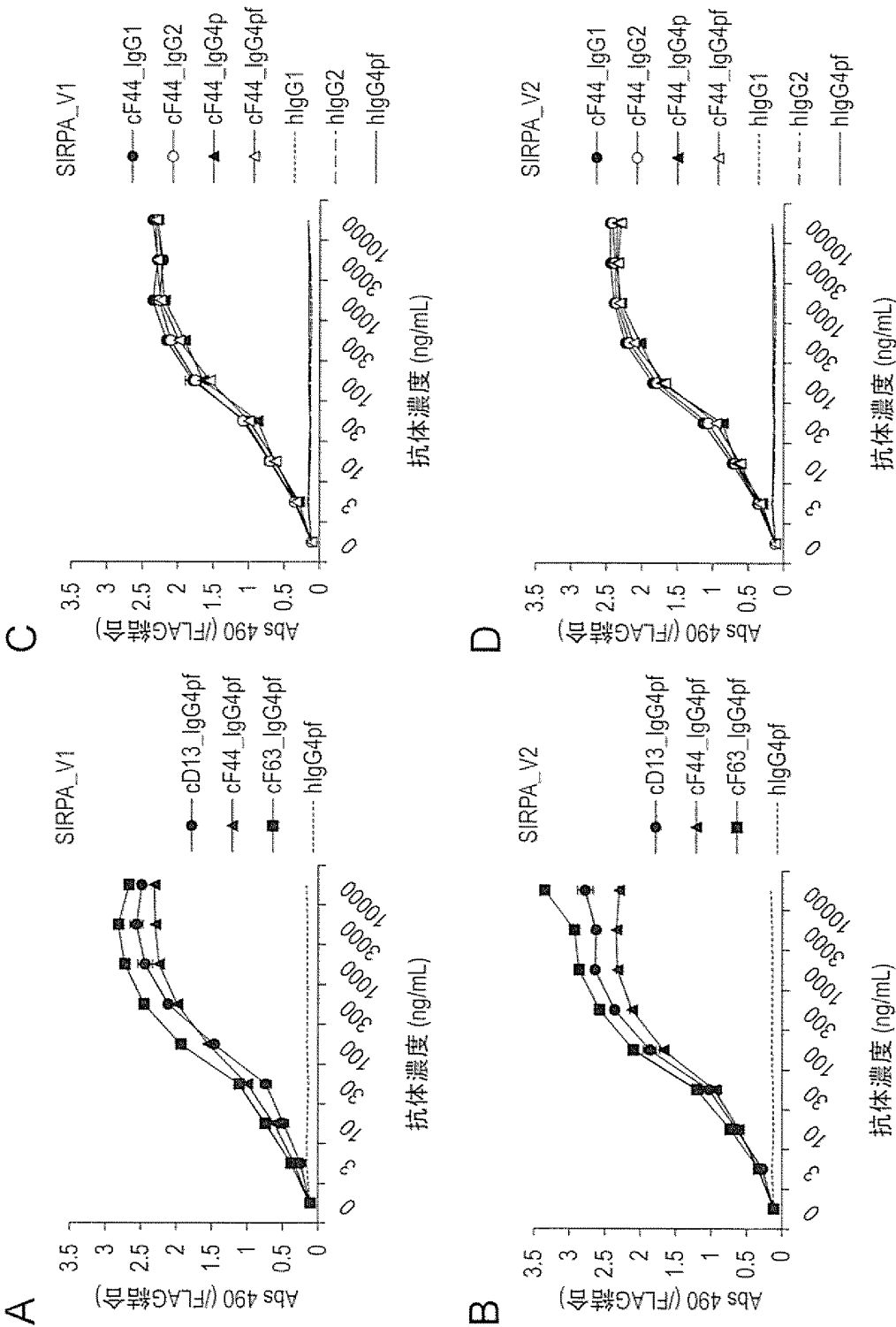
[図4]

V1	1	MEPAGPAPGRGLLCLLLAASCASGSGVAGEEELQVIQPKSVLVAAGETATILRCTATSL	60
V2	1	S.I.H..V...	60
V3	1	S.I.L..V...	60
V4	1	G.....S.I.H.....	60
V5	1	F.....	60
V6	1	.....	60
V7	1	S.I.H..V...	60
V8	1	.....	60
V9	1	.....	60
V10	1	R.....S.I.H..V...	60
V1	61	IPVGPIQWFRGAGPGRELIYNQKEGHFPRVTTVSDLTKRNNMDFSIRIGNITPADAGTY	120
V2	61	A.....ES...E.....S.S.....	120
V3	61	A.....ES...E.....S.S.....	120
V4	61	.....	120
V5	61	.....	120
V6	61	P.....	120
V7	61	A.....ES...E.....S.S.....	120
V8	61	A.....ES...E.....S.S.....	120
V9	61	.....	120
V10	61	A.....ES...E.....S.S.....	120
V1	121	CVKFRKGSRDDVEFKSGAGTELSVRA	146
V2	121	T-.....	145
V3	121	T-.....	145
V4	121	.....	146
V5	121	.....	146
V6	121	.....	146
V7	121	T-.....G	145
V8	121	T-.....	145
V9	121	.....	146
V10	121	T-.....	145

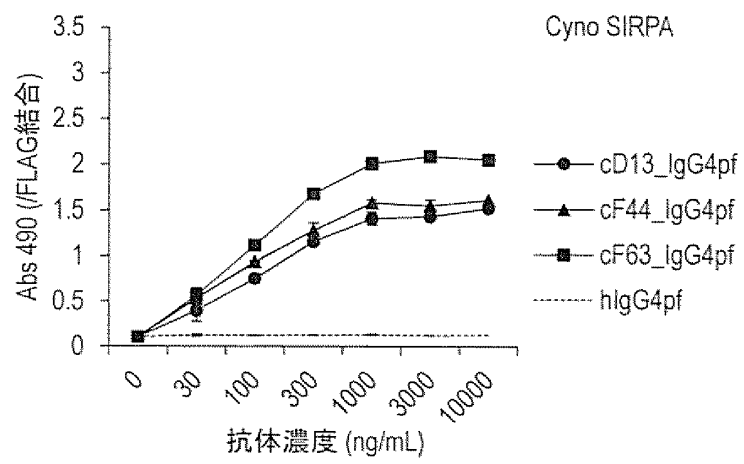
[図5]



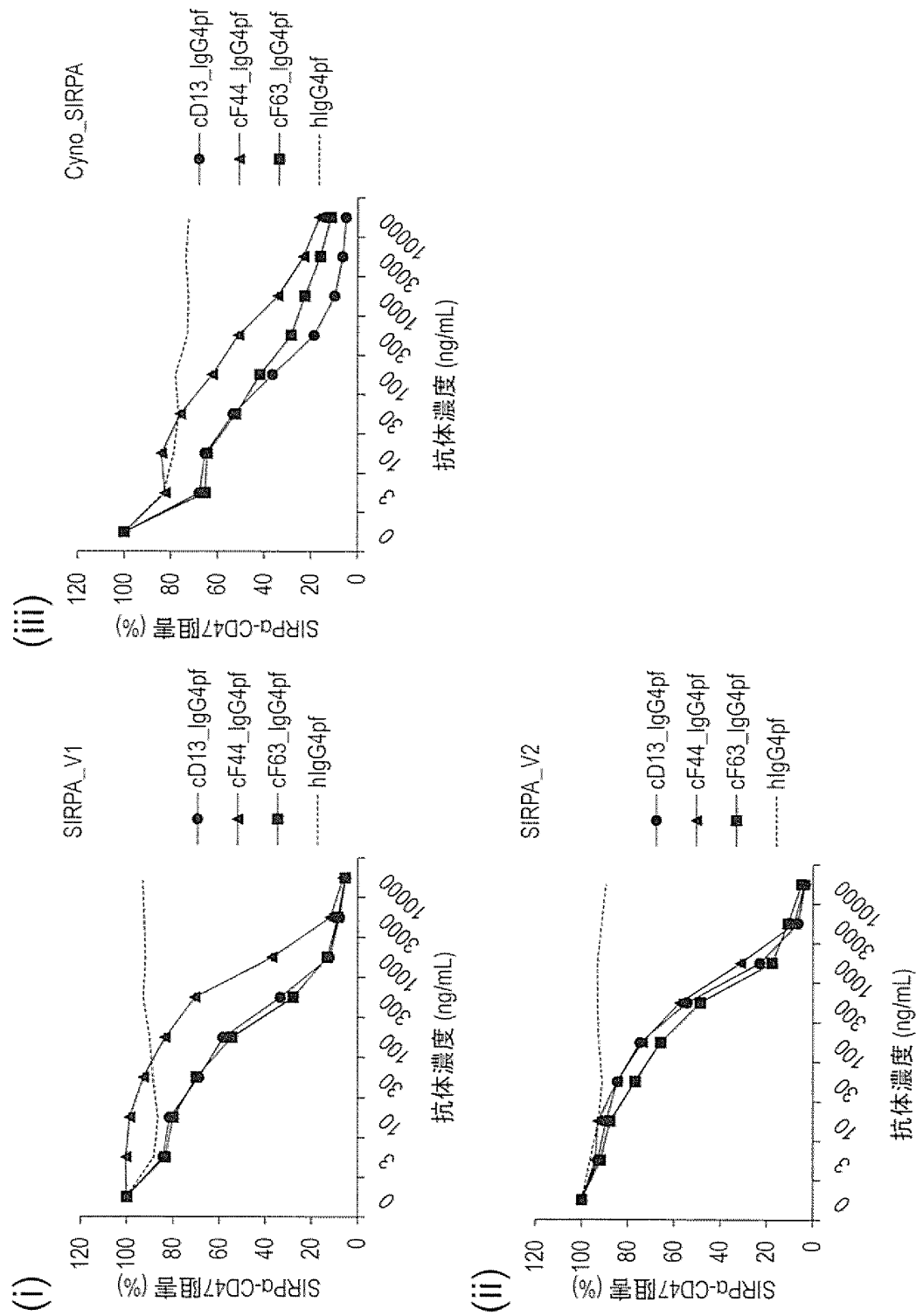
[図6]



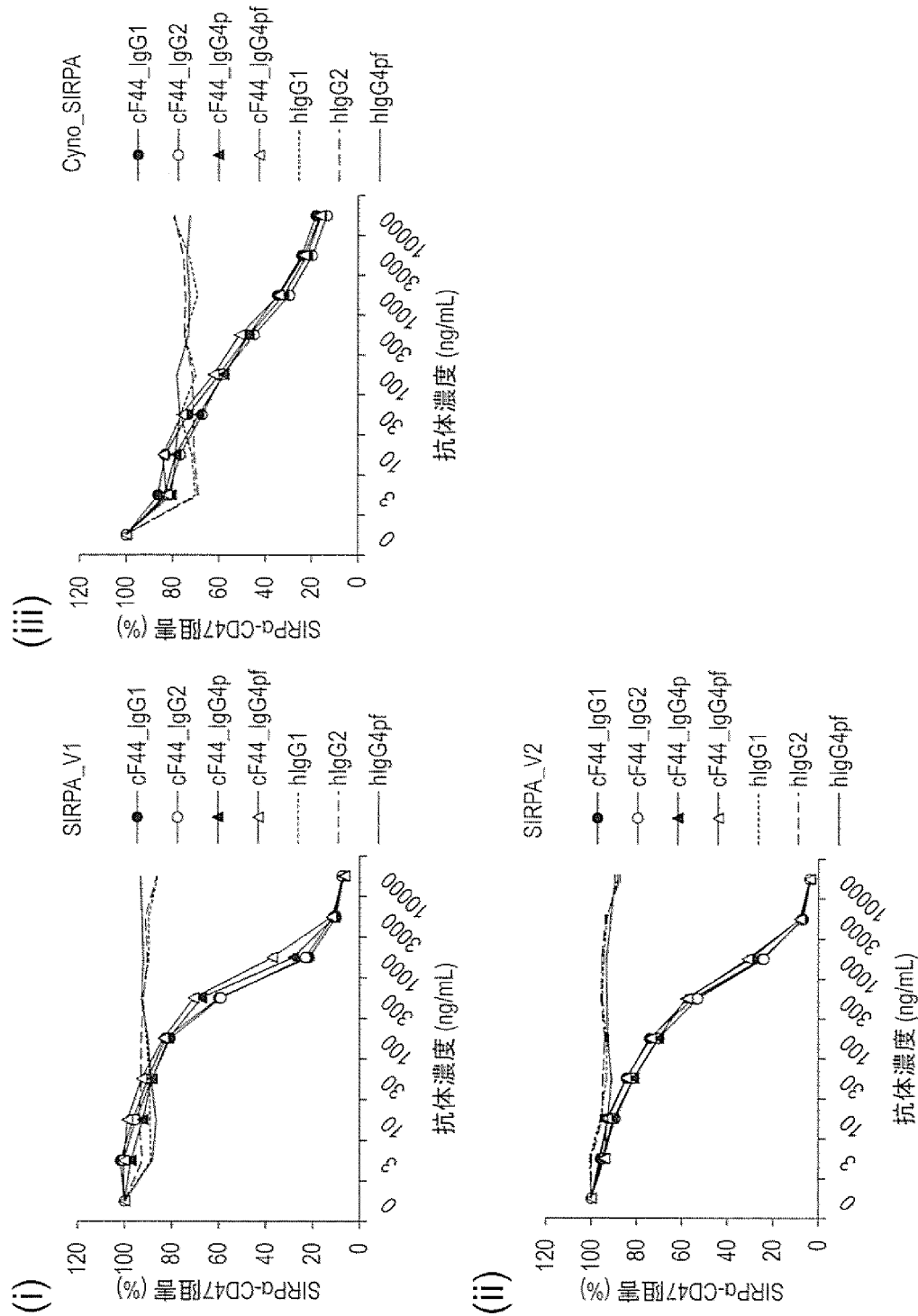
[図7]



[図8A]

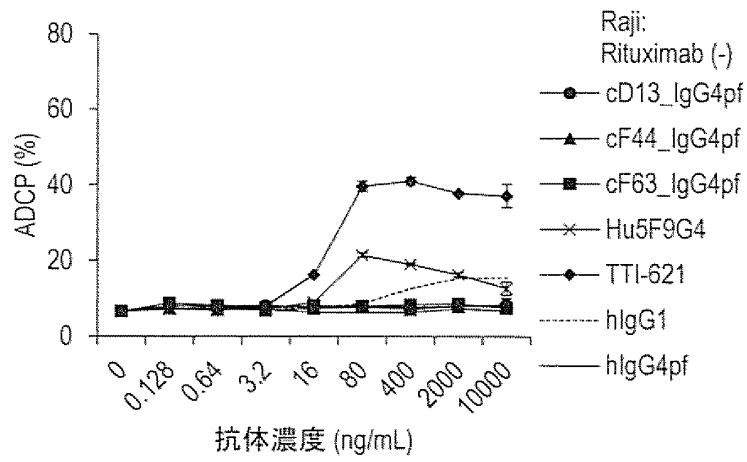


[図8B]

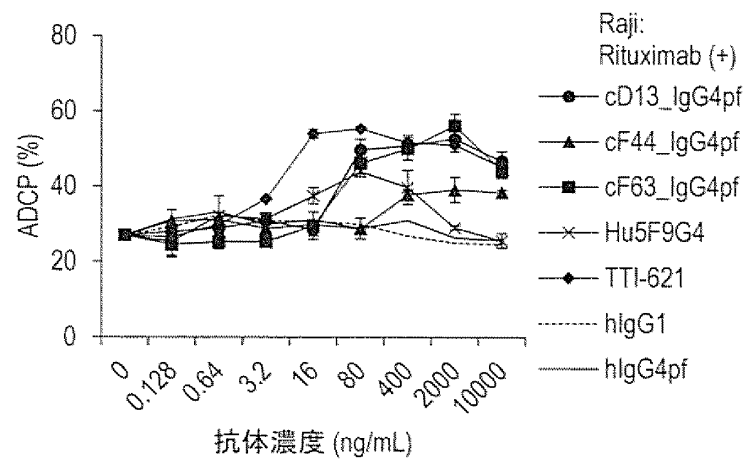


[図9]

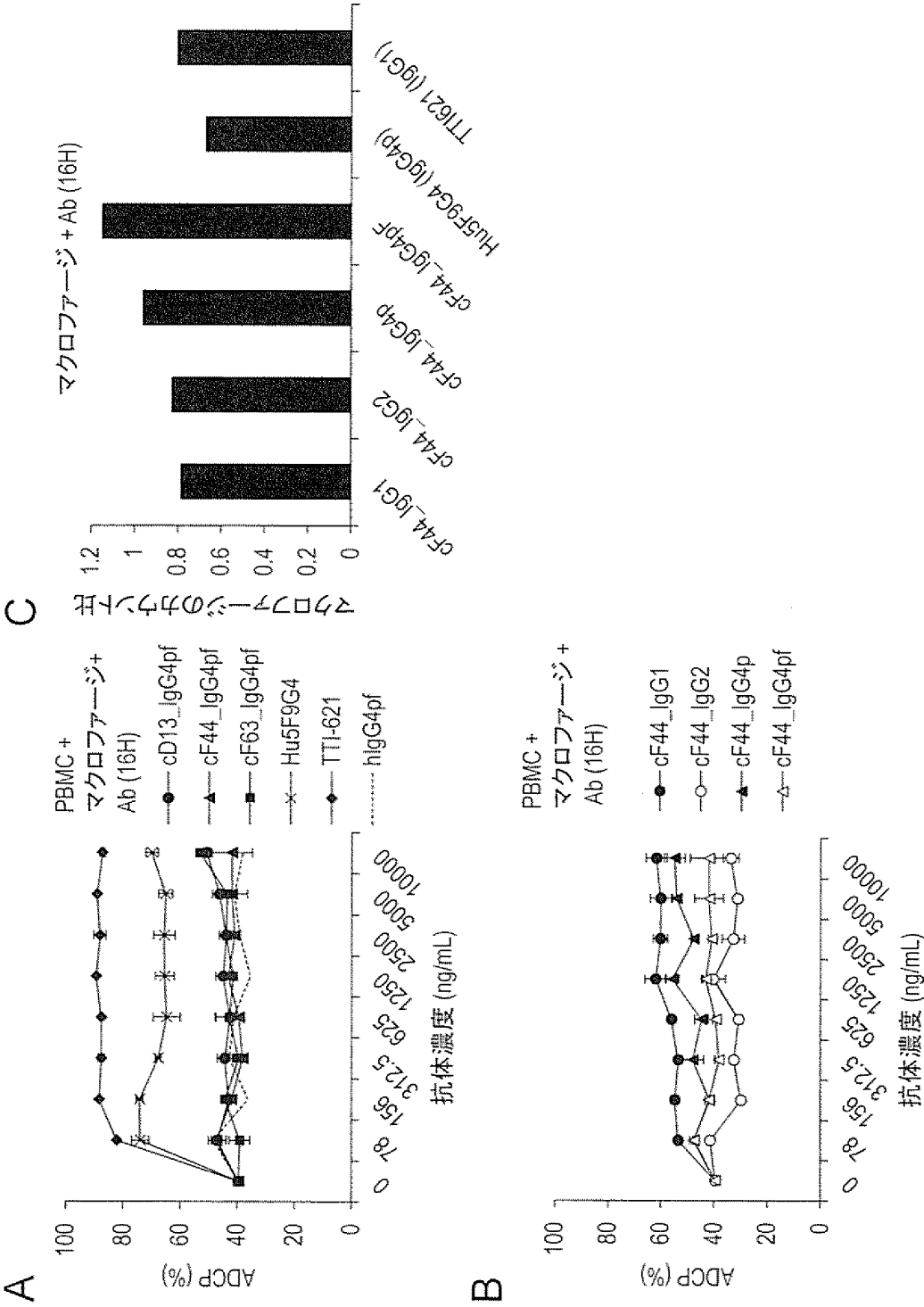
A



B



[図10]



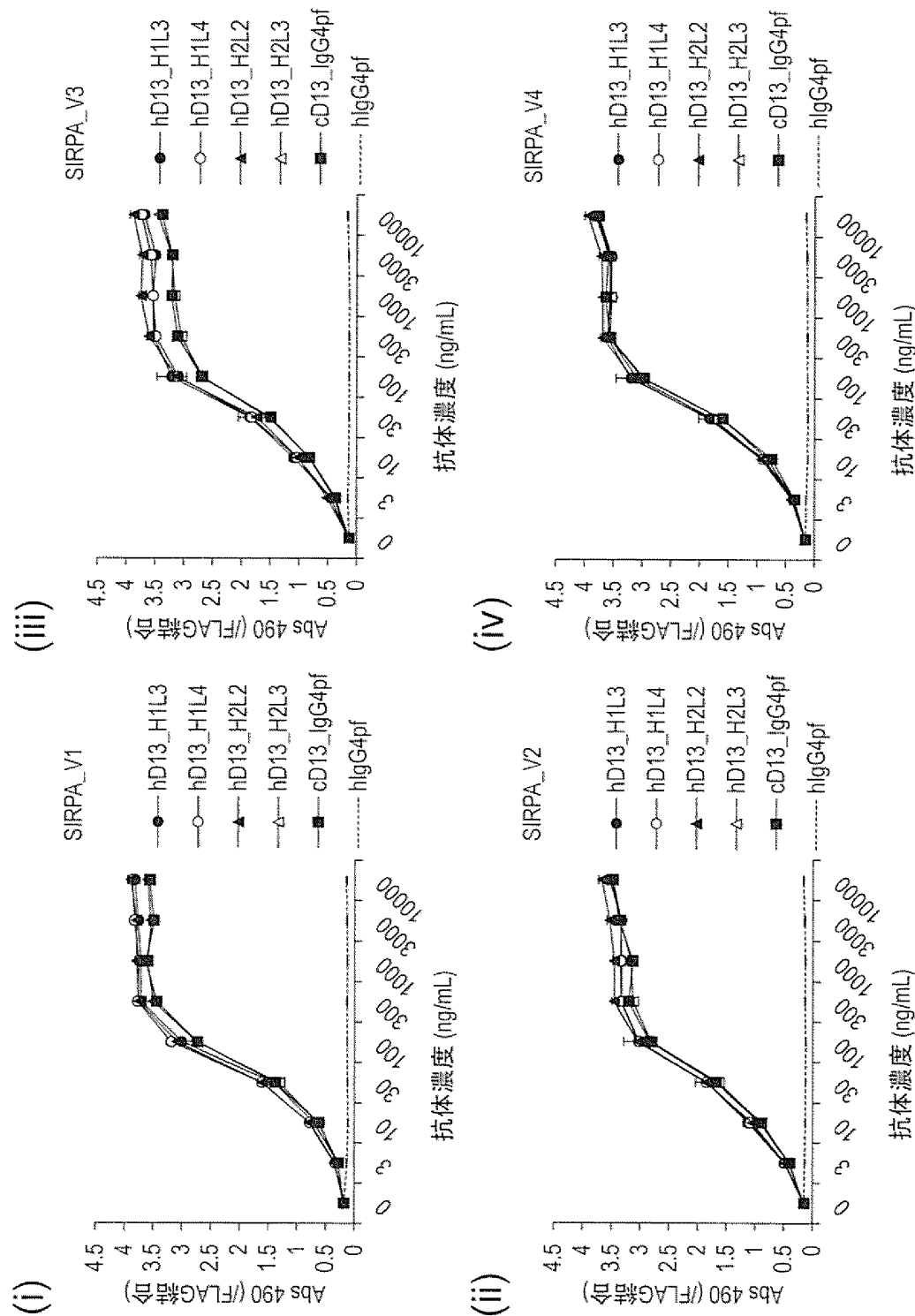
[図11]

CD13_H	1	MKHLWFFLLVAAAPRWVLS	EVQLVESGGGLVQPG	RSKLKLSCLASGFT	FSDYGMIWVRQAP	60
hH1	1	Q.....	V.....R...A.....	.....	.....	60
hH2	1	V.....	R...A.....	.....	.....	60
CD13_H	61	GKGLEWVASISSSSYIY	ADTVKGRFTISRENA	KNLFLHMTSLRSE	DALYYCARRY	120
hH1	61	S.....	D.S..R.Y.Q.N...A...	V.....	.....	120
hH2	61	S.....	D.S...Y.Q.N...A...	V.....	.....	120
CD13_H	121	GFNYPFDYWGQGV	MVTVSS			139
hH1	121	T.....				139
hH2	121	T.....				139

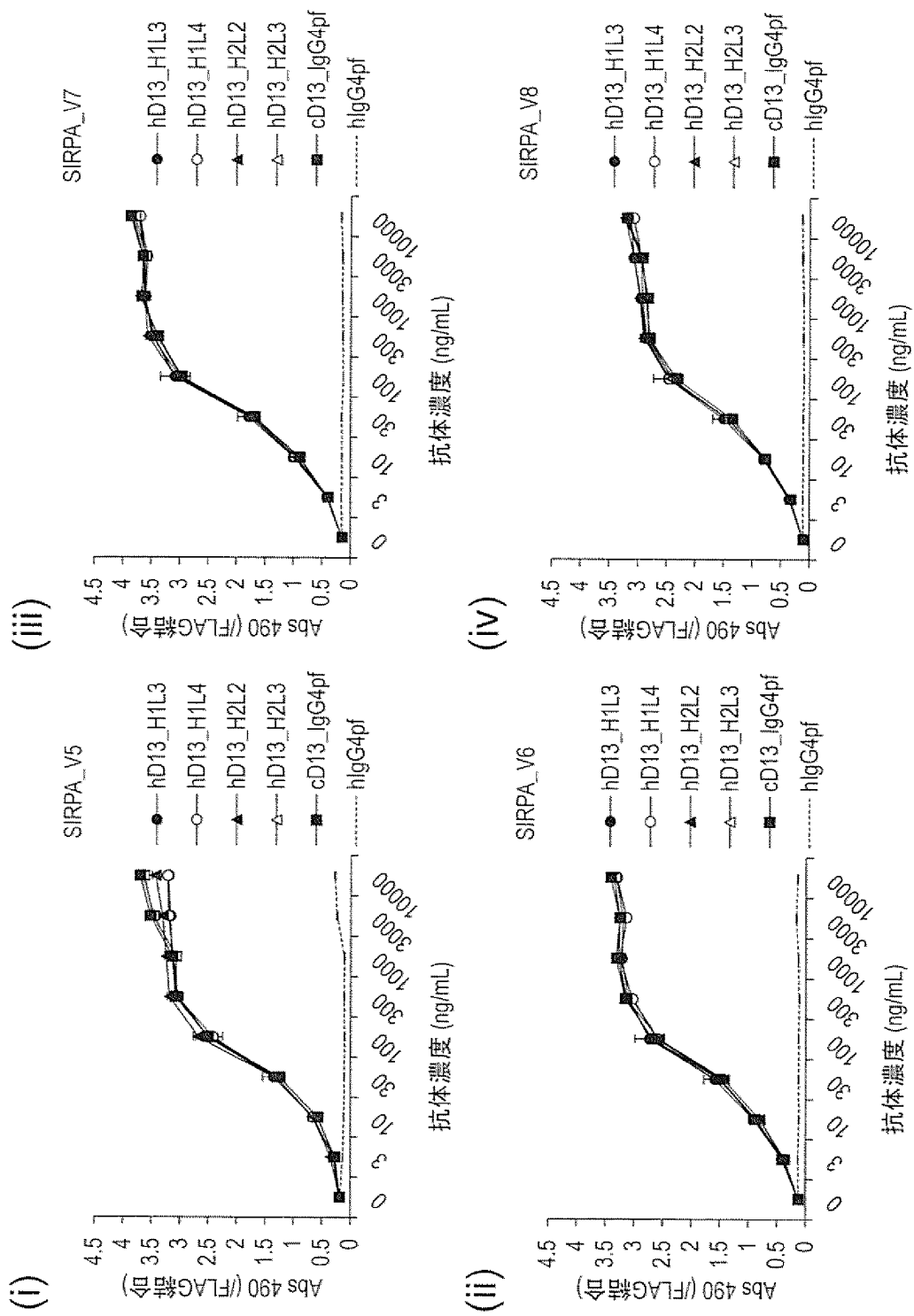
[図12]

cd13_L	1	MVLQTQVFISLLWISGAYGDTVLTQSP-ALAVSLGQRTISCGASKSVRTYMHWYQQKS	59
hL2	1	AIQ.....SS.SA.V.....T.....P	60
hL3	1	Q.....SS.SA.V.....T.....P	60
hL4	1	DS.....A.N.....P	60
cd13_L	60	GQPKLLIYSASNLEAGVPSRFGSGGTDFTLTIDPVEADDIANYYCQSSNEPPYTFGA	119
hL2	61	.KA.....SSLOPE.F.T.....Q	120
hL3	61	.K.....SSLOPE.F.T.....Q	120
hL4	61	SSLQ.E.V.V.....Q	120
cd13_L	120	GTKLELK	126
hL2	121	I.	127
hL3	121	I.	127
hL4	121	...V.I.	127

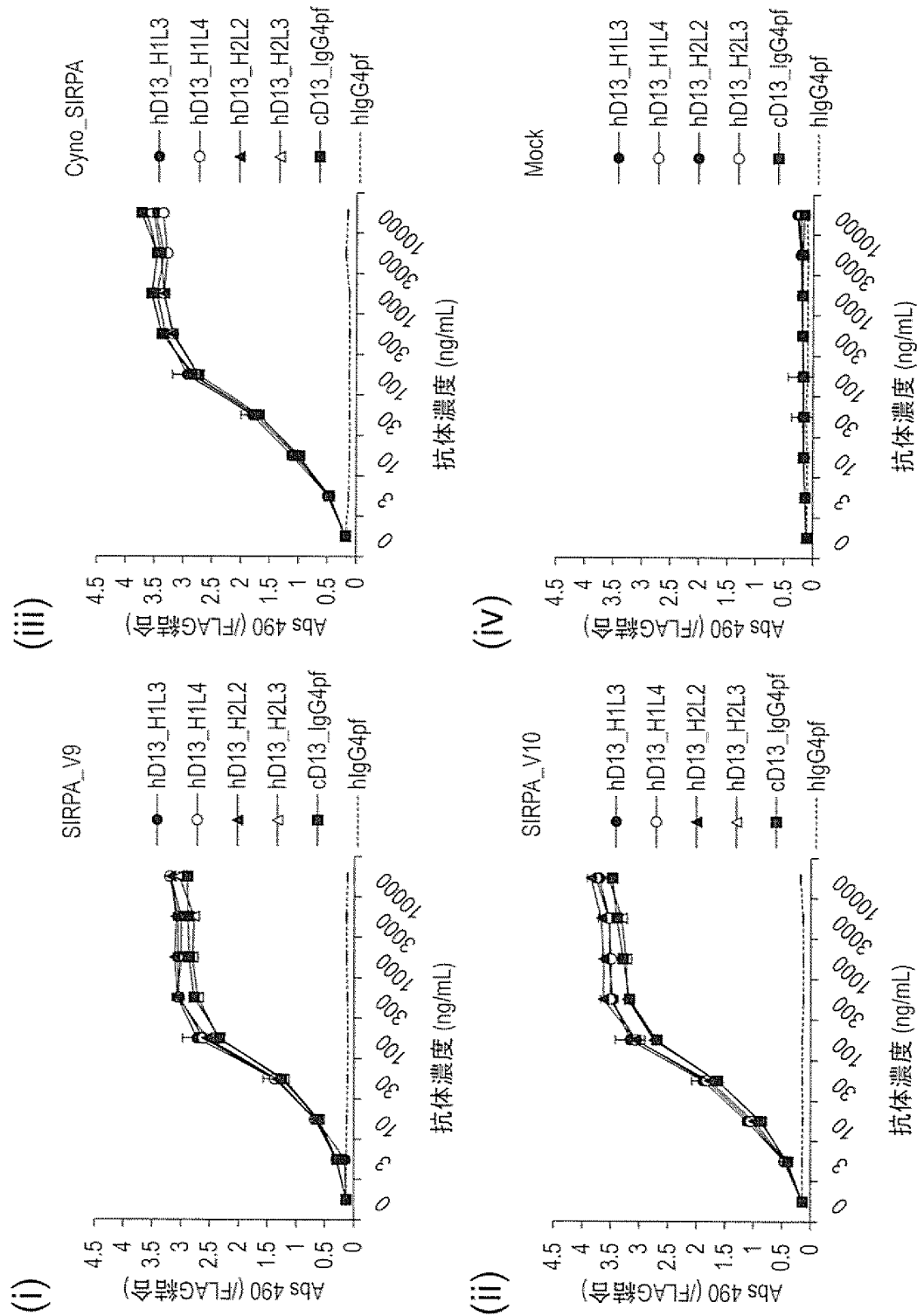
[図13A]



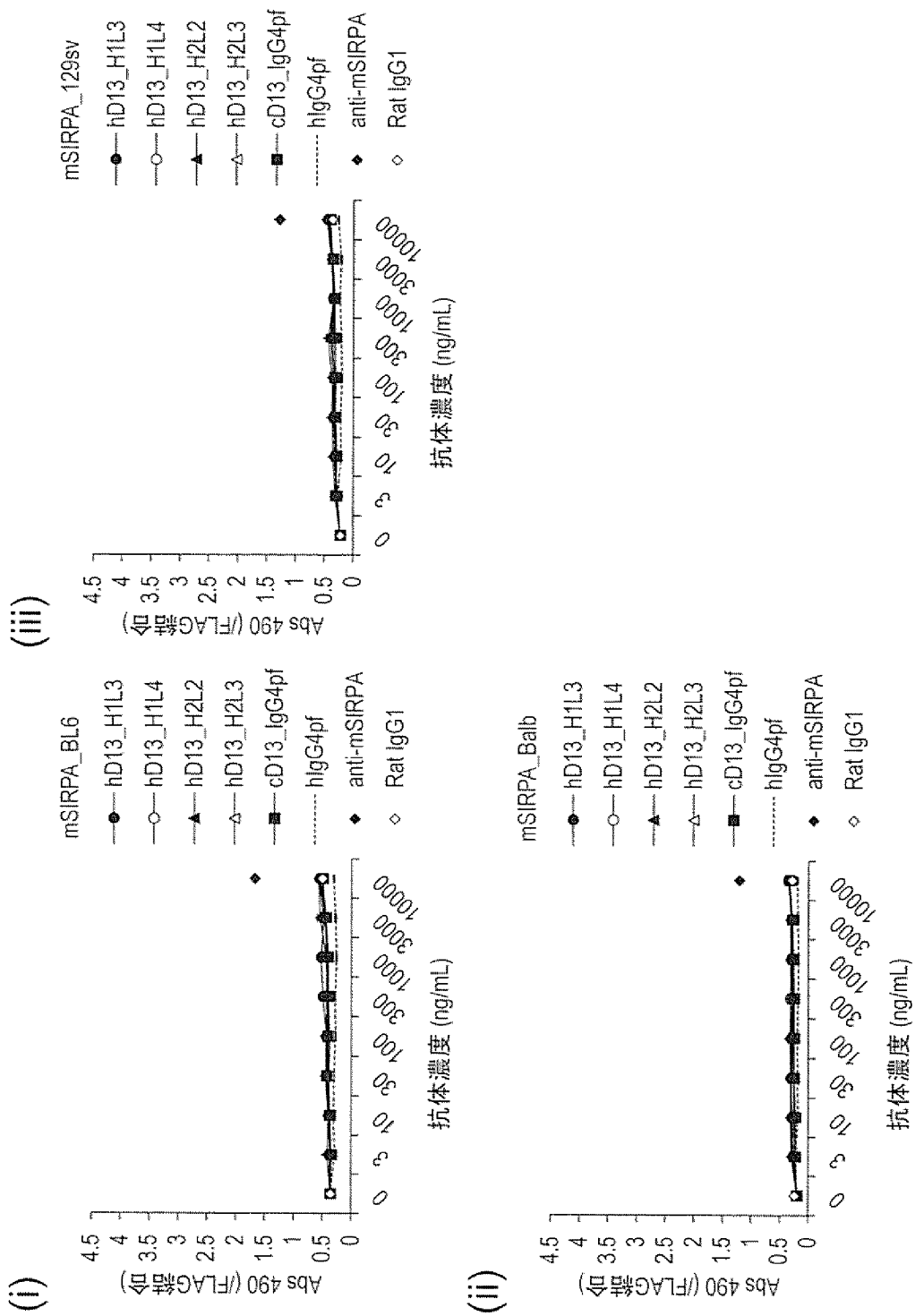
[図13B]



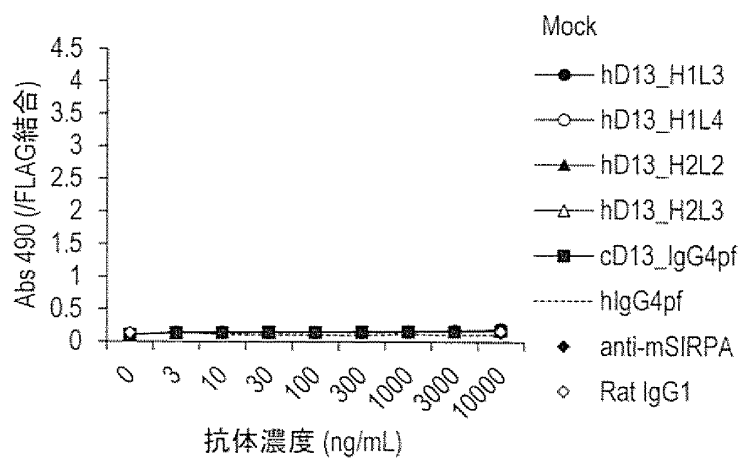
[図13C]



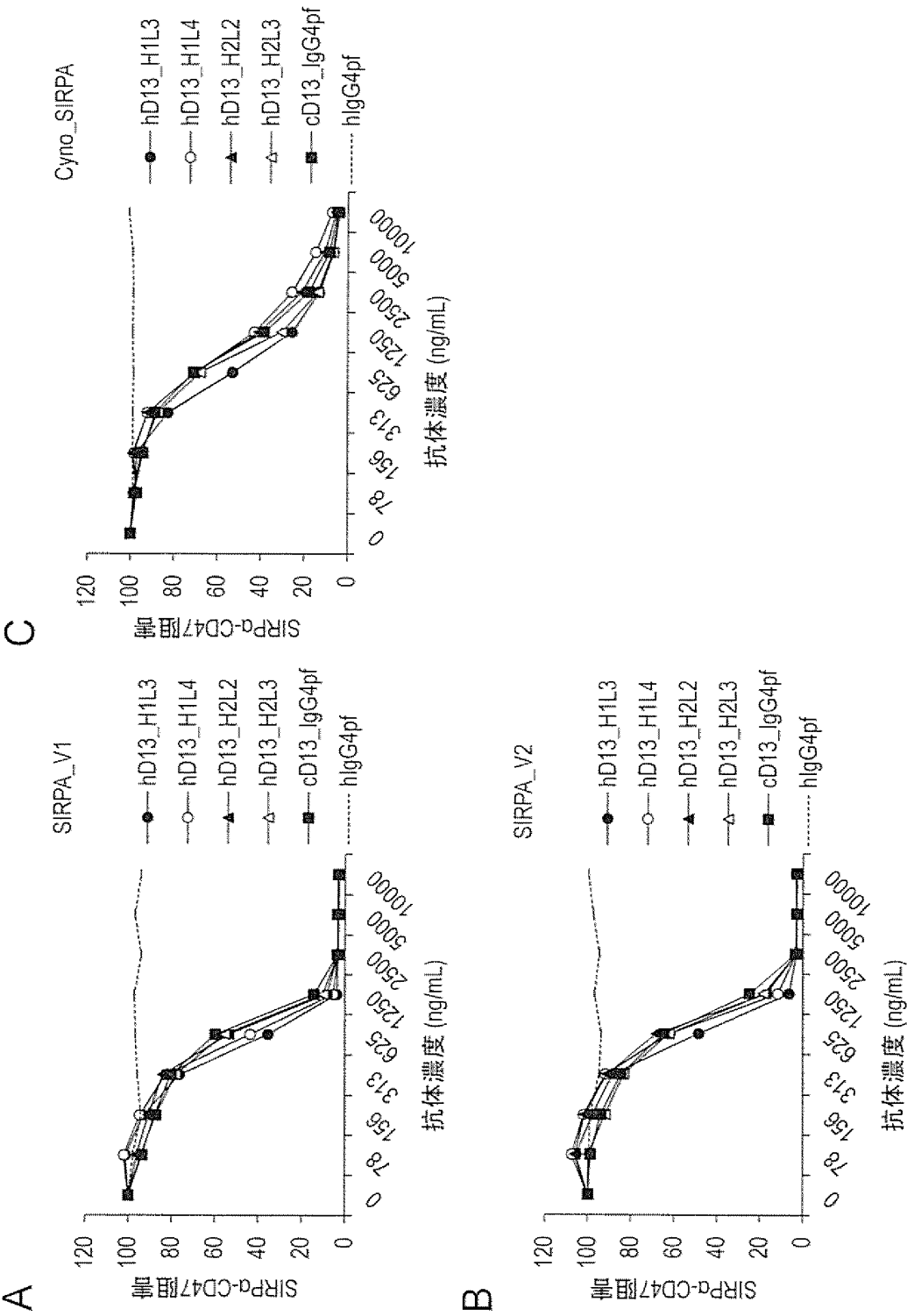
[図14A]



(i)



[図15]



A

Raji: Rituximab (-)

hD13_H1L3
hD13_H1L4
hD13_H2L2
hD13_H2L3
cD13_IgG4pf
Hu5F9-G4
TTI-621
hlgG4pf

ADCP (%)

抗体濃度 (ng/mL)

B

Raji: Rituximab (+)

hD13_H1L3
hD13_H1L4
hD13_H2L2
hD13_H2L3
cD13_IgG4pf
Hu5F9-G4
TTI-621
hlgG4pf

ADCP (%)

抗体濃度 (ng/mL)

C

Ramos: Rituximab (-)

hD13_H1L3
hD13_H1L4
hD13_H2L2
hD13_H2L3
cD13_IgG4pf
Hu5F9-G4
TTI-621
hlgG4pf

ADCP (%)

抗体濃度 (ng/mL)

D

Ramos: Rituximab (+)

hD13_H1L3
hD13_H1L4
hD13_H2L2
hD13_H2L3
cD13_IgG4pf
Hu5F9-G4
TTI-621
hlgG4pf

ADCP (%)

抗体濃度 (ng/mL)

[図17]

配列番号 22 : c D 1 3 軽鎖をコードするヌクレオチド配列

ATGGTGCTGCAGACCCAGGTGTTTCATCTCCCTGCTGCTGTGGATCTCCGGCGCGTA
CGGCGACACTGTGCTGACCCAGTCTCCTGCTTTGGCTGTGTCTCTAGGGCAGAGGG
TCACCATCTCTTGTGGGGCCAGCAAAAGTGTCCGTACATATATGCACTGGTACCAA
CAAAAATCGGGACAGCAACCCAAACTCCTGATCTATAGTGCATCCAACCTAGAGGC
TGGAGTCCCTTCCAGGTTCACTGGGAGTGGGTCTGGGACAGACTTTACCCCTACCA
TAGATCCTGTGGAGGCTGATGACATTGCAAACTATTACTGTCAGCAGAGTAATGAA
CCTCCGTACACGTTTGGAGCTGGGACCAAGCTGGAAGTGAACGGACGGTGGCCGC
CCCCTCCGTGTTTCATCTTCCCCCCTCCGACGAGCAGCTGAAGTCCGGCACCGCCT
CCGTGGTGTGCCTGCTGAATAACTTCTACCCAGAGAGGCCAAGGTGCAGTGGAAG
GTGGACAACGCCCTGCAGTCCGGGAAGTCCCAGGAGAGCGTGACCGAGCAGGACAG
CAAGGACAGCACCTACAGCCTGAGCAGCACCCCTGACCCTGAGCAAAGCCGACTACG
AGAAGCACAAGGTGTACGCCTGCGAGGTGACCCACCAGGGCCTGAGCTCCCCCGTC
ACCAAGAGCTTCAACAGGGGGGAGTGT

シグナル配列 (1-60)、可変領域 (61-378)、定常領域 (379-699)

配列番号 23 : c D 1 3 軽鎖のアミノ酸配列

MVLQTQVFISLLWLWISGAYGDTVLTQSPALAVSLGQRVTISCGASKSVRTYMHWYQ
QKSGQQPKLLIYSASNLEAGVPSRFSGSGSGTDFTLTIDPVEADDIANYYCQQSNE
PPYTFGAGTKLELKRTVAAPSVFIFFPSDEQLKSGTASVVCLLNNFYPREAKVQWK
VDNALQSGNSQESVTEQDSKSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPV
TKSFNRGEC

シグナル配列 (1-20)、可変領域 (21-126)、定常領域 (127-233)

[図18]

配列番号 24 : c D 1 3 重鎖をコードするヌクレオチド配列

ATGAAACACCTGTGGTTCTTCCTCCTGCTGGTGGCAGCTCCCAGATGGGTGCTGAG
CGAGGTACAGCTGGTGGAGTCTGGAGGAGGCTTAGTGCAGCCTGGAAGGTCCCTGA
AACTCTCCTGTTTAGCCTCTGGATTCACTTTCAGTGACTATGGAATGATCTGGGTT
CGCCAGGCTCCAGGGAAGGGGCTGGAGTGGGTTGCATCTATTAGTAGTAGTAGCAG
TTACATCTACTATGCAGACACAGTGAAGGGCCGATTACCATCTCCAGAGAAAATG
CCAAGAACACCCTGTTCTGCACATGACCAGTCTGAGGTCTGAAGACACTGCCTTG
TATTACTGTGCAAGAAGATACTATGGGTTTAACTACCCTTTTGATTACTGGGGCCA
AGGAGTCATGGTCAAGTCAAGTCAAGTCAAGTCAAGTCAAGTCAAGTCAAGTCAAG
TGGCCCCCTGTAGCAGAAGCACCAGCGAGTCTACAGCCGCCCTGGGCTGCCTCGTG
AAGGACTACTTTCCCGAGCCCGTGACCGTGTCTGGAACCTCTGGCGCTCTGACAAG
CGGCGTGCACACCTTTCCAGCCGTGCTGCAGAGCAGCGGCCTGTACTCTCTGTCCA
GCGTCGTGACTGTGCCCAGCAGCTCTCTGGGCACCAAGACCTACACCTGTAACGTG
GACCACAAGCCCAGCAACACCAAGGTGGACAAGCGGGTGGAACTCTAAGTACGGCCC
TCCCTGCCCTCCTTGCCCAGCCCCCTGAAGCCGCGGGCGGACCCTCCGTGTTCCCTGT
TCCCCCAAGCCCAAGGACACCTGATGATCAGCCGGACCCCCGAAGTGACCTGC
GTGGTGGTGGATGTGTCCCAGGAAGATCCCGAGGTGCAGTTCAATTGGTACGTGGA
CGGCGTGGAAAGTGCACAACGCCAAGACCAAGCCTAGAGAGGAACAGTTCAACAGCA
CCTACCGGGTGGTGTCCGTGCTGACAGTGTGTCACCAGGACTGGCTGAACGGCAAA
GAGTACAAGTGCAAGGTGTCCAACAAGGGCCTGCCAGCTCCATCGAGAAAACCAT
CAGCAAGGCCAAGGGCCAGCCCCGCGAACCCAGGTGTACACACTGCCTCCAAGCC
AGGAAGAGATGACCAAGAATCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTAC
CCCTCCGATATCGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAACAACCTACAA
GACCACCCCCCTGTGCTGGACTCCGATGGCTCATTCTTCCCTGTACAGCAGACTGA
CCGTGGACAAGAGCCGGTGGCAGGAAGGCAACGTGTTTCAAGTGTCTCCGTGATGCAC
GAGGCCCTGCACAACCACTACACCCAGAAGTCCCTGTCTCTGAGCCTGGGCAAA

シグナル配列 (1-57)、可変領域 (58-417)、定常領域 (418-1398)

配列番号 25 : c D 1 3 重鎖のアミノ酸配列

MKHLWFFLLLVAAPRWVLSEVQLVESGGGLVQPGRSLKLSCLASGFTFSDYGMIVV
RQAPGKGLEWVASISSSSSYIYYADTVKGRFTISRENAKNTLFLHMTSLRSEDAL
YYCARRYYGFNYPFDYWGQGMVTVSSASTKGPSVFPLAPCSRSTSESTAALGCLV
KDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVPSSSLGKTYTCNV
DHKPSNTKVDKRVESKYGPCCPCCPAPEAAGGPSVFLFPPKPKDTLMISRTPEVTC
VVVDVSQEDPEVQFNWYVDGVEVHNAKTKPREEQFNSTYRVVSVLTVLHQDWLNGK
EYKCKVSNKGLPSSIEKTIKAKGQPREPQVYTLPPSQEEMTKNQVSLTCLVKGFY
PSDIAVEWESNGQPENNYKTTTPVLDSDGSFFLYSRLTVDKSRWQEGNVFSCSVMH
EALHNHYTQKSLSLGLK

シグナル配列 (1-19)、可変領域 (20-139)、定常領域 (140-466)

[図19]

配列番号 26 : c F 4 4 軽鎖をコードするヌクレオチド配列

ATGGTGCTGCAGACCCAGGTGTTTCATCTCCCTGCTGCTGTGGATCTCCGGCGCGTA
CGGCGATGTCCAGATGACCCAGTCTCCATCTAATCTTGCTGCCTCTCCTGGAGAAA
GTGTTTCCATCAATTGCAAGGCAAGTAAGAGCATTAGCAAGTATTTAGCCTGGTAT
CAACAGAAACCTGGGAAAGCAAATAAGCTTCTTATCTACTCTGGGTCAACTTTGCA
ATCTGGAACCTCCATCGAGGTTTCAGTGGCAGTGGATCTGGTACAGATTTCACTCTCA
CCATCAGAAACCTGGAGCCTGAAGATTTTGGACTCTATTACTGTCAACAGCATAAT
GAATACCCACCCACGTTTGGAGCTGGGACCAAGTTGGAACGAAACGGACGGTGGC
CGCCCCCTCCGTGTTTCATCTTCCCCCCTCCGACGAGCAGCTGAAGTCCGGCACCG
CCTCCGTGGTGTGCCTGTGAATAACTTCTACCCAGAGAGGCCAAGGTGCAGTGG
AAGGTGGACAACGCCCTGCAGTCCGGGAACCTCCAGGAGAGCGTGACCGAGCAGGA
CAGCAAGGACAGCACCTACAGCCTGAGCAGCACCTGACCCTGAGCAAAGCCGACT
ACGAGAAGCACAAAGGTGTACGCCTGCGAGGTGACCCACCAGGGCCTGAGCTCCCC
GTCACCAAGAGCTTCAACAGGGGGGAGTGT

シグナル配列 (1-60) 、可変領域 (61-381) 、定常領域 (382-702)

配列番号 27 : c F 4 4 軽鎖のアミノ酸配列

MVLQTVFISLLWISGAYGDVQMTQSPSNLAASPGESVSINCKASKSISKYLAWY
QQKFGKANKLLIYSGSTLQSGTPSRFSGSGSGTDFTLTIRNLEPEDFGLYYCQQHN
EYPPTFGAGTKLELKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNEFYPREAKVQW
KVDNALQSGNSQESVTEQDSKDSTYLSSTLTLSKADYEEKHKVYACEVTHQGLSSP
VTKSFNRGEC

シグナル配列 (1-20) 、可変領域 (21-127) 、定常領域 (128-234)

[図20]

配列番号 28 : c F 4 4 重鎖をコードするヌクレオチド配列

ATGAAACACCTGTGGTTCTTCCTCCTGCTGGTGGCAGCTCCCAGATGGGTGCTGAG
CGAGGTGCAGCTGGTGGGAATCTGGGGGAGGCTTAGTGCAGCCTGGAAGGTCCCTGA
AACTCTCCTGTGCAGCCTCAGGATTCACTTTTCAGTAACTATTACATGGCCTGGGTC
CGCCAGGCTCCAACGAAGGGTCTGGAGTGGGTACATACATTACTACTGGTGGTGG
TAGCACTTACTTTTCGAGACTCCGTGAAGGGCCGATTCACTATCTCCAGAGATAATG
CAGAAAGCACCCCTATACCTGCAAATGGACAGTCTGAGGTCTGAGGACACGGCCACT
TATTACTGTACAGCAGCTAACTACGGAGGGTCCCTACTTTGATTACTGGGGCCAAGG
AGTCATGGTTCACAGTCAGCTCAGCCTCCACCAAGGGCCCTAGCGTGTTCCTCTGG
CCCCTTGTAGCAGAAGCACCAGCGAGTCTACAGCCGCCCTGGGCTGCCTCGTGAAG
GACTACTTTCCCGAGCCCGTGACCGTGTCTGGAACCTCTGGCGCTCTGACAAGCGG
CGTGCACACCTTTCCAGCCGTGCTGCAGAGCAGCGGCCTGTACTCTCTGTCCAGCG
TCGTGACTGTGCCCAGCAGCTCTCTGGGCACCAAGACCTACACCTGTAACGTGGAC
CACAAGCCCAGCAACACCAAGGTGGACAAGCGGGTGGAACTAAGTACGGCCCTCC
CTGCCCTCCTTGCCCAGCCCCTGAAGCCGCGGGCGGACCCTCCGTGTTCTCTGTTCC
CCCCAAAGCCCCAAGGACACCCTGATGATCAGCCGGACCCCCGAAGTGACCTGCGTG
GTGGTGGATGTGTCCCAGGAAGATCCCGAGGTGCAGTTCAATTGGTACGTGGACGG
CGTGGAAGTGCACAACGCCAAGACCAAGCCTAGAGAGGAACAGTTCAACAGCACCT
ACCGGGTGGTGTCCGTGCTGACAGTGTCTGCACCAGGACTGGCTGAACGGCAAAGAG
TACAAGTGCAAGGTGTCCAACAAGGGCCTGCCAGCTCCATCGAGAAAACCATCAG
CAAGGCCAAGGGCCAGCCCCGCAACCCCAGGTGTACACACTGCCTCCAAGCCAGG
AAGAGATGACCAAGAATCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTACCCC
TCCGATATCGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAACAACCTACAAGAC
CACCCCCCTGTGCTGGACTCCGATGGCTCATTCTTCTGTACAGCAGACTGACCG
TGGACAAGAGCCGGTGGCAGGAAGGCAACGTGTTTCAGCTGCTCCGTGATGCACGAG
GCCCTGCACAACCACTACACCCAGAAGTCCCTGTCTCTGAGCCTGGGCAAA

シグナル配列 (1-57)、可変領域 (58-414)、定常領域 (415-1395)

配列番号 29 : c F 4 4 重鎖のアミノ酸配列

MKHLWFFLLLVAAPRWVLSEVQLVESGGGLVQPGRSLKLSCAASGFTFSNYMAWV
RQAPTKGLEWVTYITTTGGGSTYFRDSVKGRFTISRDNASTLYLQMDSLRSEDAT
YYCTAANYGGSYFDYWGQGMVTVSSASTKGPSVFPLAPCSRSTSESTAALGCLVK
DYFPEPPTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGKTYTCNV
D HKPSNTKVDKRVESKYGPPCPPCPAPEAAGGPSVFLFPPKPKDTLMISRTPEVTCV
VVDVVSQEDPEVQFNWYVDGVEVHNAKTKPREEQFNSTYRVVSVLTVLHQDWLNGKE
YKCKVSNKGLPSSIEKTISKAKGQPREPQVYTLPPSQEEMTKNQVSLTCLVKGFYP
SDIAVEWESNGQPENNYKTTTPVLDSDGSFFLYSRLTVDKSRWQEGNVFSCSVMHE
ALHNHYTQKSLSLGLK

シグナル配列 (1-19)、可変領域 (20-138)、定常領域 (139-465)

[図21]

配列番号 30 : c F 6 3 軽鎖をコードするヌクレオチド配列

```
ATGGTGCTGCAGACCCAGGTGTTTCATCTCCCTGCTGCTGTGGATCTCCGGCGCGTA  
CGGCCAGTTCACGCTGACTCAACCAAAGTCCGTGTCAGGAGCTTTAAGAAGCACTA  
TCACCATTCCCTGTGAGCGCAGCAGTGGTGACATTGGAGATAGCTATGTGAGCTGG  
TACCAGCGACACTTGGGAAGACCCCCATCAATGTGATCTATGCTGATGATCAAAG  
ACCATCTGAAGTGCTGATCGGTTCTCGGGCTCCATCGACAGCTCCTCTAACTCAG  
CCTCACTGACCATCACTAATCTGCAGATGGATGATGAGGCCGACTACTTCTGTCAG  
TCTTACGATAGTAAGATTGACATTTTCGGCGGTGGAACCAAGCTCACTGTCCTAGG  
CCAGCCTAAGGCTGCCCCCTAGCGTGACCCTGTTCCCTCCTTCCAGCGAGGAGCTTC  
AAGCTAACAAGGCCACCCTGGTGTGTCTTATCTCTGACTTCTACCCTGGCGCTGTG  
ACCGTGGCCTGGAAGGCTGACAGCTCCCCTGTGAAGGCCGGAGTGGAGACCACCAC  
ACCTAGCAAGCAGTCTAACAACAAGTACGCTGCCAGCTCCTACCTGAGCCTTACCC  
CTGAGCAGTGGAAGTCTCACAGAAGCTACTCCTGTCAAGTGACCCACGAGGGCAGC  
ACCGTGGAGAAGACCGTGGCTCCTACCGAGTGTTCC
```

シグナル配列 (1-60)、可変領域 (61-390)、定常領域 (391-708)

配列番号 31 : c F 6 3 軽鎖のアミノ酸配列

```
MVLQTQVFISLLLWISGAYGQFTLTQPKSVSGALRSTITIPCERSSGDIGDSYVSW  
YQRHLGRPPINVIYADDQRPSEVSDRFSGSIDSSNSASLTITNLQMDDEADYFCQ  
SYDSKIDIFGGGKLTVLGQPKAAPSVTLFPPSSEELQANKATLVCLISDFYPGAV  
TVAWKADSSPVKAGVETTPSKQSNNKYAASSYLSLTPEQWKSHRSYSCQVTHEGS  
TVEKTVAPTECS
```

シグナル配列 (1-20)、可変領域 (21-130)、定常領域 (131-236)

[図22]

配列番号 32 : c F 6 3 重鎖をコードするヌクレオチド配列

ATGAAACACCTGTGGTTCCTCCTGCTGGTGGCAGCTCCCAGATGGGTGCTGAG
CCAGGTGCAGCTGAAGGAGTCAGGACCTGGTCTGGTGCAGCCCTCAGAGACCCCTGT
CCCTCACCTGCACTGTCTCTGGGTTCCTCACTAGCCAGCTATAGTTTAAAGTTGGGTT
CGCCAGCCCTTCAGGAAAAGGTCCTGAGTGGATGGGAAGAATGTACTATGATGGAGA
CACAGCATATAATTCAGCTCTCAAATCCCGACTGAGCATCAGCAGGGACACCTCCA
AGAACCAAGTTTTCTTAAAAATGAACAGTCTGCAAACCTGATGACACAGGCACTTAC
TACTGTACCAGAGATAGGAGTATGTTTGGTACGGATTATCCCCACTGGTACTTTGA
CTTCTGGGGCCCAGGAACCATGGTCACCGTGAGCTCAGCCTCCACCAAGGGCCCTA
GCGTGTTCCTCTGGCCCCCTGTAGCAGAAGCACCAGCGAGTCTACAGCCGCCCTG
GGCTGCCTCGTGAAGGACTACTTTCCCGAGCCCGTGACCGTGTCTGGAACCTCTGG
CGCTCTGACAAGCGGCGTGACACCTTTCCAGCCGTGCTGCAGAGCAGCGGCCTGT
ACTCTCTGTCCAGCGTCGTGACTGTGCCCAGCAGCTCTCTGGGCACCAAGACCTAC
ACCTGTAACGTGGACCACAAGCCCAGCAACACCAAGGTGGACAAGCGGGTGGAAATC
TAAGTACGGCCCTCCCTGCCCCCTCTTGCCAGCCCTGAAGCCGCGGGCGGACCCCT
CCGTGTTCCCTGTTCCCCCAAAGCCCAAGGACACCCTGATGATCAGCCGGACCCCC
GAAGTGACCTGCGTGGTGGTGGATGTGTCCCAGGAAGATCCCGAGGTGCAGTTCAA
TTGGTACGTGGACGGCGTGGAAGTGACAACGCCAAGACCAAGCCTAGAGAGGAAC
AGTTCAACAGCACCTACCGGGTGGTGTCCGTGCTGACAGTGTGCACCAGGACTGG
CTGAACGGCAAAGAGTACAAGTGCAAGGTGTCCAACAAGGGCCTGCCAGCTCCAT
CGAGAAAACCATCAGCAAGGCCAAGGGCCAGCCCCGCGAACCCCAGGTGTACACAC
TGCTCCAAGCCAGGAAGAGATGACCAAGAATCAGGTGTCCCTGACCTGTCTCGTG
AAAGGCTTCTACCCCTCCGATATCGCCGTGGAATGGGAGAGCAACGGCCAGCCCGA
GAACAACCTACAAGACCACCCCCCTGTGCTGGACTCCGATGGCTCATTCTTCTGT
ACAGCAGACTGACCGTGGACAAGAGCCGGTGGCAGGAAGGCAACGTGTTAGCTGC
TCCGTGATGCACGAGGCCCTGCACAACCACTACACCCAGAAGTCCCTGTCTCTGAG
CCTGGGCAAA

シグナル配列 (1-57)、可変領域 (58-429)、定常領域 (430-1410)

配列番号 33 : c F 6 3 重鎖のアミノ酸配列

MKHLWFFLLLVAAPRWVLSQVQLKESGPGLVQPSETLSLTCTVSGFSLASYSLSWV
RQPSGKGPEWMGRMYDGDYAYNSALKSRLSISRDTSKNQVFLKMNSLQDDDTGTY
YCTRDRSMFGTDYPHWYFDFWGPMTMTVSSASTKGPSVFPLAPCSRSTSESTAAL
GCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTY
TCNVDPKPSNTKVDKRVESKYGPCCPAPCAAGGPSVFLFPPKPKDTLMISRTPE
VTCVVDVDSQEDPEVQFNWYVDGVEVHNAKTKPREEQFNSTYRVVSVLTVLHQDW
LNGKEYKCKVSNKGLPSSIEKTIKAKGQPREPQVYTLPPSQEEMTKNQVSLTCLV
KGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSRLTVDKSRWQEGNVFSC
SVMHEALHNHYTQKSLSLGLK

シグナル配列 (1-19)、可変領域 (20-143)、定常領域 (144-470)

[図23]

配列番号 34 : h L 2 をコードするヌクレオチド配列

```
ATGGTGCTGCAGACCCAGGTGTTTCATCTCCCTGCTGCTGTGGATCTCCGGCGCGTA  
CGGCGCCATTACAGCTGACACAGAGCCCTAGCAGCCTGAGCGCCTCTGTGGGCCAGA  
GAGTGACCATTACCTGCGGCGCCAGCAAGAGCGTGCGGACCTACATGCACTGGTAT  
CAGCAGAAGCCCGGCAAGGCCCAAGCTGCTGATCTACAGCGCCTCCAATCTGGA  
AGCCGGCGTGCCAGCAGATTTTCCGGCTCTGGCAGCGGCACCGACTTCACCCTGA  
CAATCAGCAGCCTGCAGCCCCGAGGACTTCGCCACCTACTACTGCCAGCAGAGCAAC  
GAGCCCCCTACACCTTTGGCCAGGGCACCAAGCTGGAAATCAAGCGTACGGTGGC  
CGCCCCCTCCGTGTTTCATCTTCCCCCTCCGACGAGCAGCTGAAGTCCGGCACCG  
CCTCCGTGGTGTGCCTGCTGAATACTTCTACCCCAGAGAGGCCAAGGTGCAGTGG  
AAGGTGGACAACGCCCTGCAGTCCGGGAACCTCCAGGAGAGCGTGACCGAGCAGGA  
CAGCAAGGACAGCACCTACAGCCTGAGCAGCACCTGACCCTGAGCAAAGCCGACT  
ACGAGAAGCACAAAGGTGTACGCCTGCGAGGTGACCCACCAGGGCCTGAGTCCCCC  
GTCACCAAGAGCTTCAACAGGGGGGAGTGT
```

シグナル配列 (1-60)、可変領域 (61-381)、定常領域 (382-702)

配列番号 35 : h L 2 のアミノ酸配列

```
MVLQTQVFISLLLWISGAYGAIQLTQSPSSLASVQQRVTITCGASKSVRTYMHWY  
QQKPGKAPKLLIYSASNLEAGVPSRFSGSGTDFTLTISSLQPEDFATYYCQQSN  
EPPYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQW  
KVDNALQSGNSQESVTEQDSKDSTYLSSTLTLSKADYEKHKVYACEVTHQGLSSP  
VTKSFNRGEC
```

シグナル配列 (1-20)、可変領域 (21-127)、定常領域 (128-234)

[図24]

配列番号 36 : h L 3 をコードするヌクレオチド配列

```
ATGGTGCTGCAGACCCAGGTGTTTCATCTCCCTGCTGCTGTGGATCTCCGGCGCGTA
CGGCGATACCCAGCTGACACAGAGCCCTAGCAGCCTGTCTGCCAGCGTGGGCCAGA
GAGTGACCATTACCTGCGGCGCCAGCAAGAGCGTGCGGACCTACATGCACTGGTAT
CAGCAGAAGCCCGGCAAGCAGCCCCAAGCTGCTGATCTACAGCGCCTCCAACCTGGA
AGCCGGCGTGCCCGAGCAGATTTTCTGGCAGCGGCTCCGGCACCGACTTCACCCTGA
CAATCAGCAGCCTGCAGCCCGAGGACTTCGCCACCTACTACTGCCAGCAGAGCAAC
GAGCCCCCTACACCTTTGGCCAGGGCACCAAGCTGGAAATCAAGCGTACGGTGGC
CGCCCCCTCCGTGTTTCATCTTCCCCCCTCCGACGAGCAGCTGAAGTCCGGCACCG
CCTCCGTGGTGTGCTGCTGAATAACTTCTACCCAGAGAGGCCAAGGTGCAGTGG
AAGGTGGACAACGCCCTGCAGTCCGGGAACTCCCAGGAGAGCGTGACCGAGCAGGA
CAGCAAGGACAGCACCTACAGCCTGAGCAGCACCTGACCCTGAGCAAAGCCGACT
ACGAGAAGCACAAAGGTGTACGCCTGCGAGGTGACCCACCAGGGCCTGAGCTCCCC
GTCACCAAGAGCTTCAACAGGGGGGAGTGT
```

シグナル配列 (1-60)、可変領域 (61-381)、定常領域 (382-702)

配列番号 37 : h L 3 のアミノ酸配列

```
MVLQTVFISLLLWISGAYGDTQLTQSPSSLSASVGQRVTTTCGASKSVRTYMHWY
QQKPGKQPKLLIYSASNLEAGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSN
EPPYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQW
KVDNALQSGNSQESVTEQDSKDSTYLSSTLTLSKADYEKHKVYACEVTHQGLSSP
VTKSFNRGEC
```

シグナル配列 (1-20)、可変領域 (21-127)、定常領域 (128-234)

[図25]

配列番号 38 : h L 4 をコードするヌクレオチド配列

ATGGTGCTGCAGACCCAGGTGTTTCATCTCCCTGCTGCTGTGGATCTCCGGCGCGTA
CGGCGATACCGTGCTGACCCAGAGCCCTGATAGCCTGGCCGTGTCCTGGGACAGA
GAGCCACCATCAATTGCGGCGCCAGCAAGAGCGTGCGGACCTACATGCACTGGTAT
CAGCAGAAGCCCCGGCCAGCAGCCCAAGCTGCTGATCTACAGCGCCTCCAACCTGGA
AGCCGGCGTGCCAGCAGATTTCTGGCAGCGGCTCCGGCACCGACTTCACCCTGA
CAATCAGCTCCCTGCAGGCCGAGGACGTGGCCGTGTACTACTGCCAGCAGAGCAAC
GAGCCCCCTACACCTTTGGCCAGGGCACCAAGGTGGAAATCAAGCGTACGGTGGC
CGCCCCCTCCGTGTTTCATCTTCCCCCCTCCGACGAGCAGCTGAAGTCCGGCACCG
CCTCCGTGGTGTGCCTGCTGAATAACTTCTACCCCAGAGAGGCCAAGGTGCAGTGG
AAGGTGGACAACGCCCTGCAGTCCGGGAACCTCCAGGAGAGCGTGACCGAGCAGGA
CAGCAAGGACAGCACCTACAGCCTGAGCAGCACCTGACCCTGAGCAAAGCCGACT
ACGAGAAGCACAAGGTGTACGCCTGCGAGGTGACCCACCAGGGCCTGAGCTCCCCC
GTCACCAAGAGCTTCAACAGGGGGGAGTGT

シグナル配列 (1-60) 、可変領域 (61-381) 、定常領域 (382-702)

配列番号 39 : h L 4 のアミノ酸配列

MVLQTQVFISLLLWISGAYGDTVLTQSPDSLAVSLGQRATINCGASKSVRTYMHWY
QQKPGQQPKLLIYSASNLEAGVPSRFSGSGSGTDFTLTISSLQAEDVAVYYCQQSN
EPPYTFGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQW
KVDNALQSGNSQESVTEQDSKDSSTLSLTLSKADYEKHKVYACEVTHQGLSSP
VTKSFNRGEC

シグナル配列 (1-20) 、可変領域 (21-127) 、定常領域 (128-234)

[図26]

配列番号 40 : h H 1 をコードするヌクレオチド配列

ATGAAACACCTGTGGTTCTTCCTCCTGCTGGTGGCAGCTCCCAGATGGGTGCTGAG
CCAGGTGCAGCTGGTGAATCTGGCGGCGGAGTGGTGCAGCCTGGCAGAAAGCCTGA
GACTGAGCTGTGCCGCCAGCGGCTTCACCTTCAGCGACTACGGCATGATCTGGGTG
CGCCAGGCCCCCTGGCAAAGGCCCTGGAATGGGTGGCCAGCATCAGCAGCAGCTCCAG
CTACATCTACTACGCCGACAGCGTGAAGGGCCGGTTCACCATCAGCCGGGACAACA
GCAAGAACCGGCTGTACCTGCAGATGAACAGCCTGCGGGCCGAGGACACCGCCGTG
TACTATTGCCCCAGACGGTACTACGGCTTCAACTACCCCTTCGACTACTGGGGCCA
GGGCACAATGGTCACCGTCAGCTCAGCCTCCACCAAGGGCCCTAGCGTGTTCCTC
TGGCCCCCTTGTAGCAGAAGCACCAGCGAGTCTACAGCCGCCCTGGGCTGCCTCGTG
AAGGACTACTTTCCTGAGCCCGTGACCGTGTCTGGAAGTCTGGCGCTCTGACAAG
CGGCGTGCACACCTTTCAGCCGTGCTGCAGAGCAGCGGCCTGTAAGTCTCTGTCCA
GCGTCGTGACTGTGCCCAGCAGCTCTCTGGGCACCAAGACCTACACCTGTAACGTG
GACCACAAGCCCAGCAACACCAAGGTGGACAAGCGGGTGAATCTAAGTACGGCCC
TCCCTGCCCTCCTTGCCCAGCCCCCTGAAGCCGCGGGCGGACCCTCCGTGTTCCTGT
TCCCCCACAAGCCCAAGGACACCTGATGATCAGCCGGACCCCCGAAGTGACCTGC
GTGGTGGTGGATGTGTCCAGGAAGATCCCGAGGTGCAGTTCAATTGGTACGTGGA
CGGCGTGAAGTGCACAACGCCAAGACCAAGCCTAGAGAGGAACAGTTCAACAGCA
CCTACCGGGTGGTGTCCGTGCTGACAGTGTGACACAGGACTGGCTGAACGGCAAA
GAGTACAAGTGCAAGGTGTCCAACAAGGGCCTGCCAGCTCCATCGAGAAAACCAT
CAGCAAGGCCAAGGGCCAGCCCCGCGAACCCAGGTGTACACACTGCCTCCAAGCC
AGGAAGAGATGACCAAGAATCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTAC
CCCTCCGATATCGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAACAACCTACAA
GACCACCCCCCTGTGCTGGACTCCGATGGCTCATTCTTCCTGTACAGCAGACTGA
CCGTGGACAAGAGCCGGTGGCAGGAAGGCAACGTGTTTACGCTGCTCCGTGATGCAC
GAGGCCCTGCACAACCACTACACCCAGAAGTCCCTGTCTCTGAGCCTGGGCAAA

シグナル配列 (1-57)、可変領域 (58-417)、定常領域 (418-1398)

配列番号 41 : h H 1 のアミノ酸配列

MKHLWFFLLLVAAAPRWVLSQVQLVESGGGVVQPGRSLRLSCAASGFTFSDYGMIWV
RQAPGKGLEWVASISSSSSYIYYADSVKGRFTISRDN SKNRLYLQMNSLR AEDTAV
YYCARRYYGFNYPFDYWGQGTMTVSSASTKGPSVFPLAPCSRSTSESTAALGCLV
KDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYTCNV
DHKPSNTKVDKRVESKYGPPCPPCPAPEAAGGPSVFLFPPKPKDTLMISRTPEVTC
VVVDVSQEDPEVQFNWYVDGVEVHNAKTKPREEQFNSTYRVVSVLTVLHQDWLNGK
EYKCKVSNKGLPSSIEKTI SKAKGQPREPQVYTLPPSQEEMTKNQVSLTCLVKGFY
PSDIAVEWESNGQPENNYKTTTPVLDSDGSFFLYSRLTVDKSRWQEGNVFSCSVMH
EALHNHYTQKSLSLSLGK

シグナル配列 (1-19)、可変領域 (20-139)、定常領域 (140-466)

[図27]

配列番号 4 2 : h H 2 をコードするヌクレオチド配列

ATGAAACACCTGTGGTTCTTCCTCCTGCTGGTGGCAGCTCCCAGATGGGTGCTGAG
CGAAGTGCAGCTGGTGAATCTGGCGGCGGAGTGGTGCAGCCTGGCAGAAGCCTGA
GACTGAGCTGTGCCGCCAGCGGCTTCACCTCAGCGACTACGGCATGATCTGGGTG
CGCCAGGCCCCCTGGCAAAGGCCTGGAATGGGTGGCCAGCATCAGCAGCAGCTCCAG
CTACATCTACTACGCCGACAGCGTGAAGGGCCGGTTCACCATCAGCCGGGACAACA
GCAAGAACACCCTGTACCTGCAGATGAACAGCCTGCGGGCCGAGGACACCGCCGTG
TACTATTGCGCCAGACGGTACTACGGCTTCAACTACCCCTTCGACTACTGGGGCCA
GGGCACAATGGTCACCGTCAGCTCAGCCTCCACCAAGGGCCCTAGCGTGTTCCCTC
TGGCCCCCTTG TAGCAGAAGCACCAGCGAGTCTACAGCCGCCCTGGGCTGCCTCGTG
AAGGACTACTTTCCCGAGCCCGTGACCGTGTCTGGAATCTGGCGCTCTGACAAG
CGGCGTGCACACCTTTCCAGCCGTGCTGCAGAGCAGCGGCCTGTACTCTCTGTCCA
GCGTCGTGACTGTGCCCAGCAGCTCTCTGGGCACCAAGACCTACACCTGTAACGTG
GACCACAAGCCCAGCAACACCAAGGTGGACAAGCGGGTGAATCTAAGTACGGCCC
TCCCTGCCCTCCTTGCCAGCCCTGAAGCCGCGGGCGGACCCCTCCGTGTTCCCTGT
TCCCCCAAAGCCCAAGGACACCCTGATGATCAGCCGACCCCCGAAGTGACCTGC
GTGGTGGTGGATGTGTCCCAGGAAGATCCCGAGGTGCAGTTCAATTGGTACGTGGA
CGGCGTGGAAAGTGACAACGCCAAGACCAAGCCTAGAGAGGAACAGTTCAACAGCA
CCTACCGGGTGGTGTCCGTGCTGACAGTGTGCACCAGGACTGGCTGAACGGCAAA
GAGTACAAAGTGCAAGGTGTCCAACAAGGGCCTGCCCAGCTCCATCGAGAAAACCAT
CAGCAAGGCCAAGGGCCAGCCCCGCGAACCCAGGTGTACACACTGCCTCCAAGCC
AGGAAGAGATGACCAAGAATCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTAC
CCCTCCGATATCGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAACAACTACAA
GACCACCCCCCTGTGCTGGACTCCGATGGCTCATTCTTCTGTACAGCAGACTGA
CCGTGGACAAGAGCCGGTGGCAGGAAGGCAACGTGTTAGCTGCTCCGTGATGCAC
GAGGCCCTGCACAACCACTACACCCAGAAGTCCCTGTCTCTGAGCCTGGGCAAA

シグナル配列 (1-57)、可変領域 (58-417)、定常領域 (418-1398)

配列番号 4 3 : h H 2 のアミノ酸配列

MKHLWFFLLLVAAPRWVLSEVQLVESGGGVVQPGRLRLSCAASGFTTFSDYGMIVV
RQAPGKGLEWVASISSSSSYIYYADSVKGRFTISRDNKNTLYLQMNLSRAEDTAV
YYCARRYYGFNYPFDYWGGQTMVTVSSASTKGPSVFPLAPCSRSTSESTAALGCLV
KDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGKTYTCNV
DHKPSNTKVDKRVESKYGPPCPPCPAPEAAGGPSVFLFPPKPKDTLMISRTPEVTC
VVVDVQSQEDPEVQFNWYVDGVEVHNAKTKPREEQFNSTYRVVSVLTVLHQDWLNGK
EYKCKVSNKGLPSSIEKTIKAKGQPREPQVYTLPPSQEEMTKNQVSLTCLVKGFY
PSDIAVEWESNGQPENNYKTPPVLDSDGSFFLYSRLTVDKSRWQEGNVFSCSVMH
EALHNHYTQKSLSLGLK

シグナル配列 (1-19)、可変領域 (20-139)、定常領域 (140-466)

[図28]

配列番号 1 : D 1 3 C D R L 1
GASKSVRTYMH

配列番号 2 : D 1 3 C D R L 2
SASNLEA

配列番号 3 : D 1 3 C D R L 3
QQSNEPPYT

配列番号 4 : D 1 3 C D R H 1
GFTFSDYGM I

配列番号 5 : D 1 3 C D R H 2
SISSSSSYIY

配列番号 6 : D 1 3 C D R H 3
RYYGFNYPFDY

[図29]

配列番号 7 : F 4 4 C D R L 1
KASKSISKYLA

配列番号 8 : F 4 4 C D R L 2
SGSTLQS

配列番号 9 : F 4 4 C D R L 3
QQHNEYPP T

配列番号 1 0 : F 4 4 C D R H 1
GFTFSNY YMA

配列番号 1 1 : F 4 4 C D R H 2
YITTGGGSTY

配列番号 1 2 : F 4 4 C D R H 3
ANYGGSYFDY

[図30]

配列番号 13 : F 6 3 C D R L 1
ERSSGDIGDSYVS

配列番号 14 : F 6 3 C D R L 2
ADDQRPS

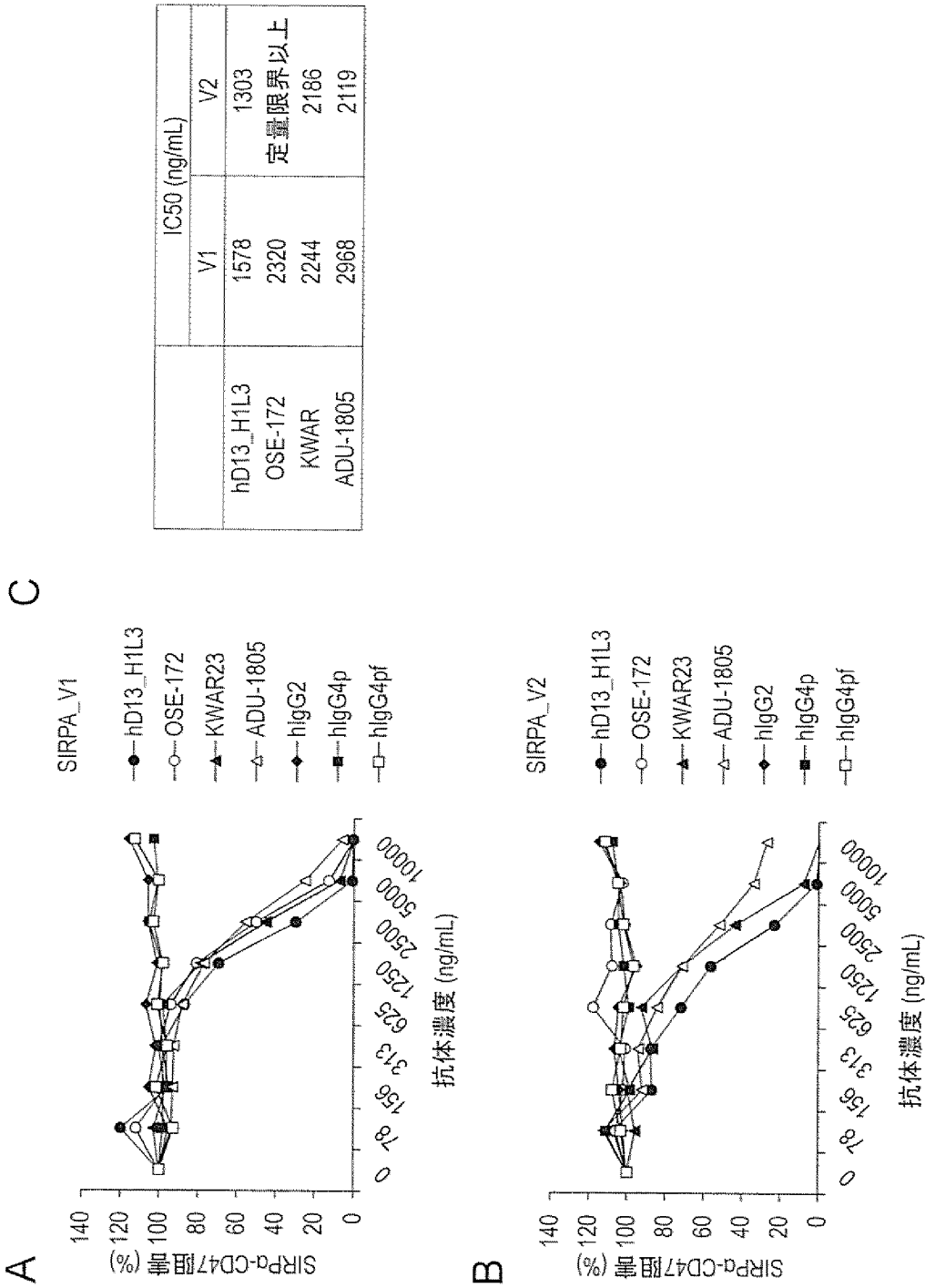
配列番号 15 : F 6 3 C D R L 3
QSYDSKIDI

配列番号 16 : F 6 3 C D R H 1
GFSLASYSLs

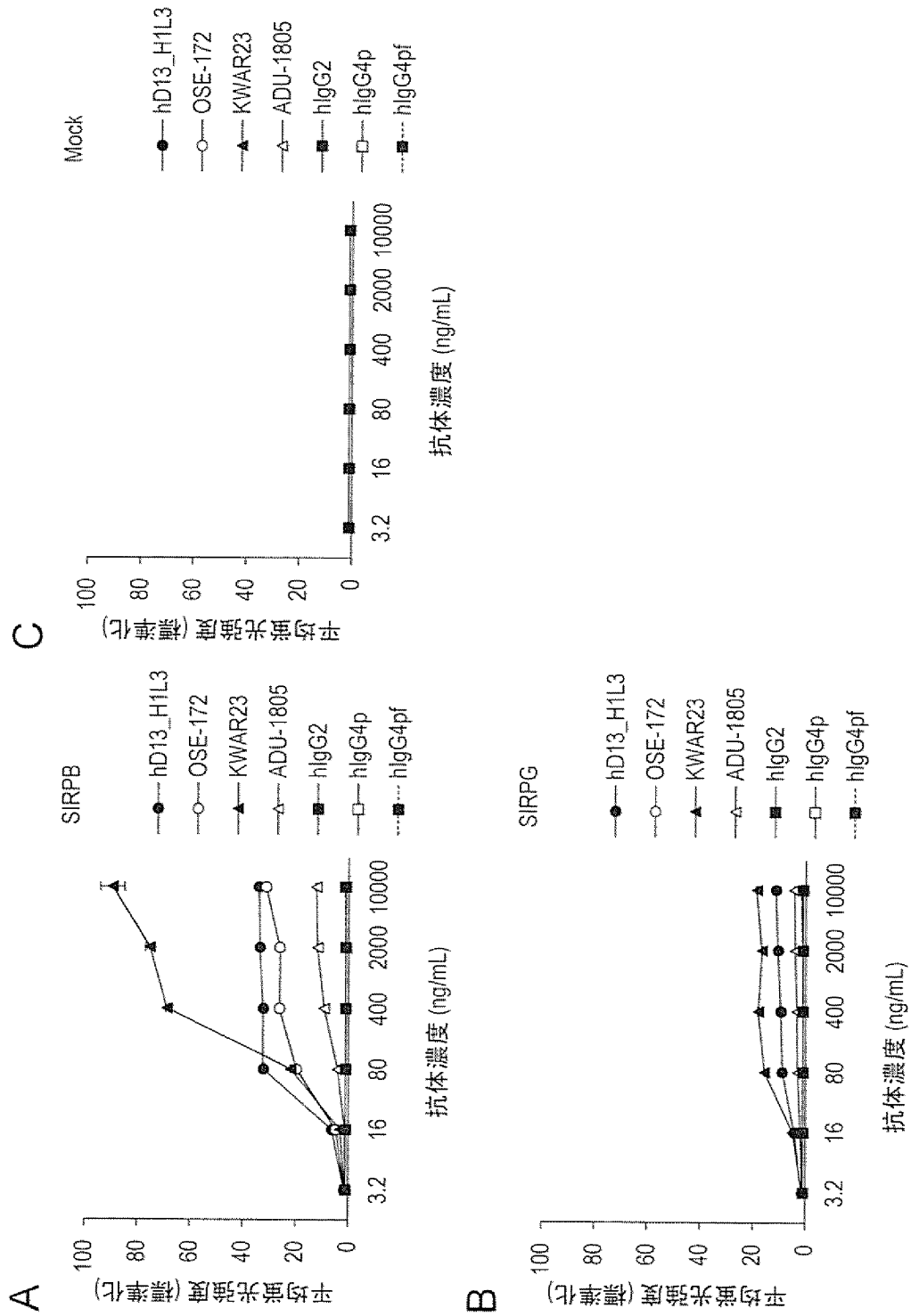
配列番号 17 : F 6 3 C D R H 2
RMYDGDTA

配列番号 18 : F 6 3 C D R H 3
DRSMFGTDYPHWYFDF

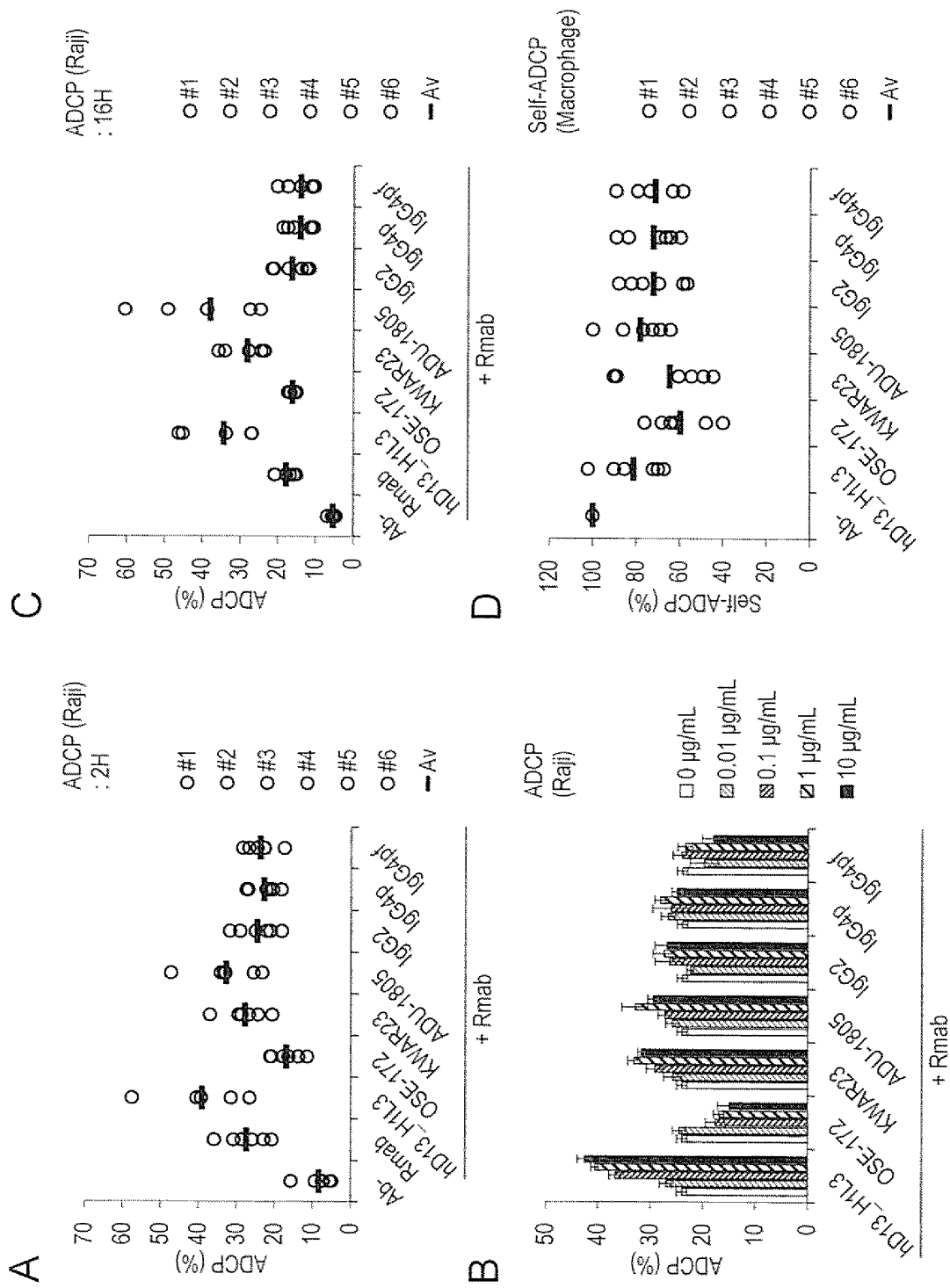
[図31]



[図32]



[図33]



[図34]

配列番号 81 : OSE-172 抗体重鎖 (OSE-172_hG4Pro) のアミノ酸配列

MKHLWFFLLLVAAAPRWVLSEVQLVQSGAEVKKPGESLRISCKASGYSFTSYVWHWV
 RQMPGKGLEWMGNIDPSDSDTHYSPSFQGHVTLSDKSI STAYLQLSSLKASDTAM
 YYCVRGGTGTLAYFAYWGQGT LVTVSSASTKGPSVFPLAPCSRSTSESTAALGCLV
 KDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTKTYTCNV
 DHKPSNTKVDKRVESKYGPCCPPCPAPEFLGGPSVFLFPPKPKDTLMISRTPEVTC
 VVVDVSQEDPEVQFNWYVDGVEVHNAKTKPREEQFNSTYRVVSVLTVLHQDWLNGK
 EYKCKVSNKGLPSSIEKTI SKAKGQPREPQVYTLPPSQEEMTKNQVSLTCLVKGFY
 PSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSRLTVDKSRWQEGNVFSCSVMH
 EALHNHYTQKSLSLSPGK*

配列番号 82 : OSE-172 抗体軽鎖 (OSE-172_hK) のアミノ酸配列

MVLQTQVFISLLLWISGAYGDVVMTQSPISLPVTLGQPASISCRSSQSLVHSYGNT
 YLYWFQQRPGQSPRLLIYRVSNRFGVDPDRFSGSGSGTDFTLKISRVEAEDVGVYY
 CFQGTHTVPYTEGGGKTVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPRE
 AKVQWKVDNALQSGNSQESVTEQDSKDSSTYSLSSTLTLSKADYEKHKVYACEVTHQ
 GLSSPVTKSFNRGEC*

[図35]

配列番号 83 : KWAR23 抗体重鎖 (KWAR23_hG4Pro) のアミノ酸配列

MKHLWFFLLLVAAAPRWVLSEVQLQQSGAELVKPGASVKLSCTASGFNIKDYIHWV
 QQRTEQGLEWIGRIDPEDGETKYAPKFQDKATITADTSSNTAYLHLSSLTSEDTAV
 YYCARWGAYWGQGT LVTVSAASTKGPSVFPLAPCSRSTSESTAALGCLVKDYFPEP
 VTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTKTYTCNV DHKPSNT
 KVDKRVESKYGPCCPPCPAPEFLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSQ
 EDPEVQFNWYVDGVEVHNAKTKPREEQFNSTYRVVSVLTVLHQDWLNGKEYKCKVS
 NKGLPSSIEKTI SKAKGQPREPQVYTLPPSQEEMTKNQVSLTCLVKGFYPSDIAVE
 WESNGQPENNYKTTPPVLDSDGSFFLYSRLTVDKSRWQEGNVFSCSVMHEALHNHY
 TQKSLSLSLGK*

配列番号 84 : KWAR23 抗体軽鎖 (KWAR23_hK) のアミノ酸配列

MVLQTQVFISLLLWISGAYGQIVLTQSPAIMASAPGEKVTLTCSASSSVSSSYLYW
 YQKPGSSPKLWIYSTSNLASGVPARFSGSGSGTSYSLTISSMEAEDAASYFCHQW
 SSYPRTFGAGTKLELKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQ
 WKVDNALQSGNSQESVTEQDSKDSSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSS
 PVTKSFNRGEC*

[図36]

配列番号85：ADU-1805抗体重鎖（ADU-1805__hG2）のアミノ酸配列

MKHLWFFELLVAAAPRWVLSEVQLVQSGAEVVKPGASVKLSCKASGSTFTSYWMHWV
KQAPGQGLEWIGAIYPVNSDTTYNQKFKGKATLTVDKSASTAYMELSSLRSED
TAVYYCTRSFYYSLDAAWFVYWGQGLTVTVSSASTKGPSVFPLAPCSRSTSESTAALGC
LVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVPSNFGTQTYTC
NVDHKPSNTKVDKTVKCCVECPPCPAPPVAGPSVFLFPPKPKDTLMISRTPEVT
CIVVDVSHEDPEVQFNWYVDGVEVHNAKTKPREEQFNSTFRVVSVLTVVHQDWLNG
KEYKCKVSNKGLPAPIEKTISKTKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF
YPSDIAVEWESNGQPENNYKTPPMLDSDGSFFLYSKLTVDKSRWQQGNVFS
CSVMHEALHNHYTQKSLSLSPGK*

配列番号86：ADU-1805抗体軽鎖（ADU-1805__hK）のアミノ酸配列

MVLQTQVFISLLWISGAYGDIQMTQSPSSLSASVGDRTITCRASQDIGSRLNWL
QQKPGKAPKRLIYATSSLD SGVPSRFSGSGSGTEFTLTISSLQPEDFATYYCLQYA
SSPFTFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQW
KVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSP
VTKSFNRGEC*