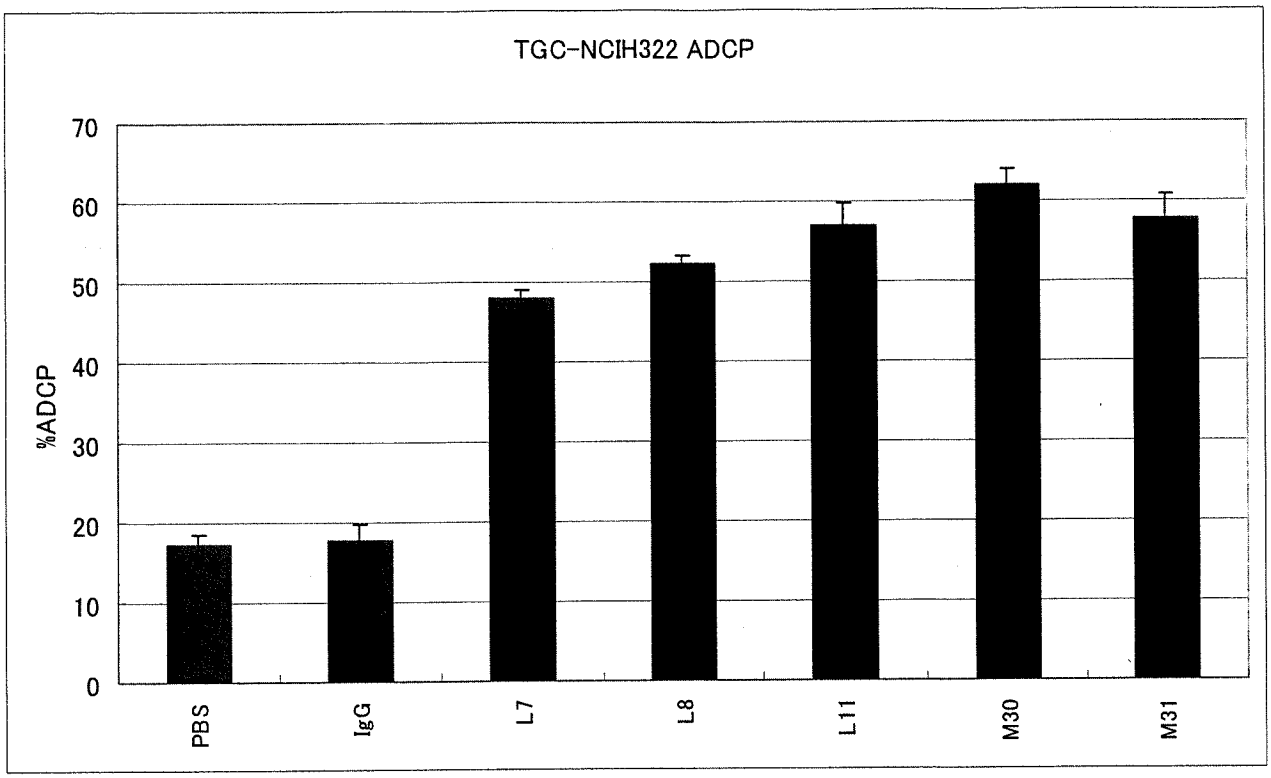
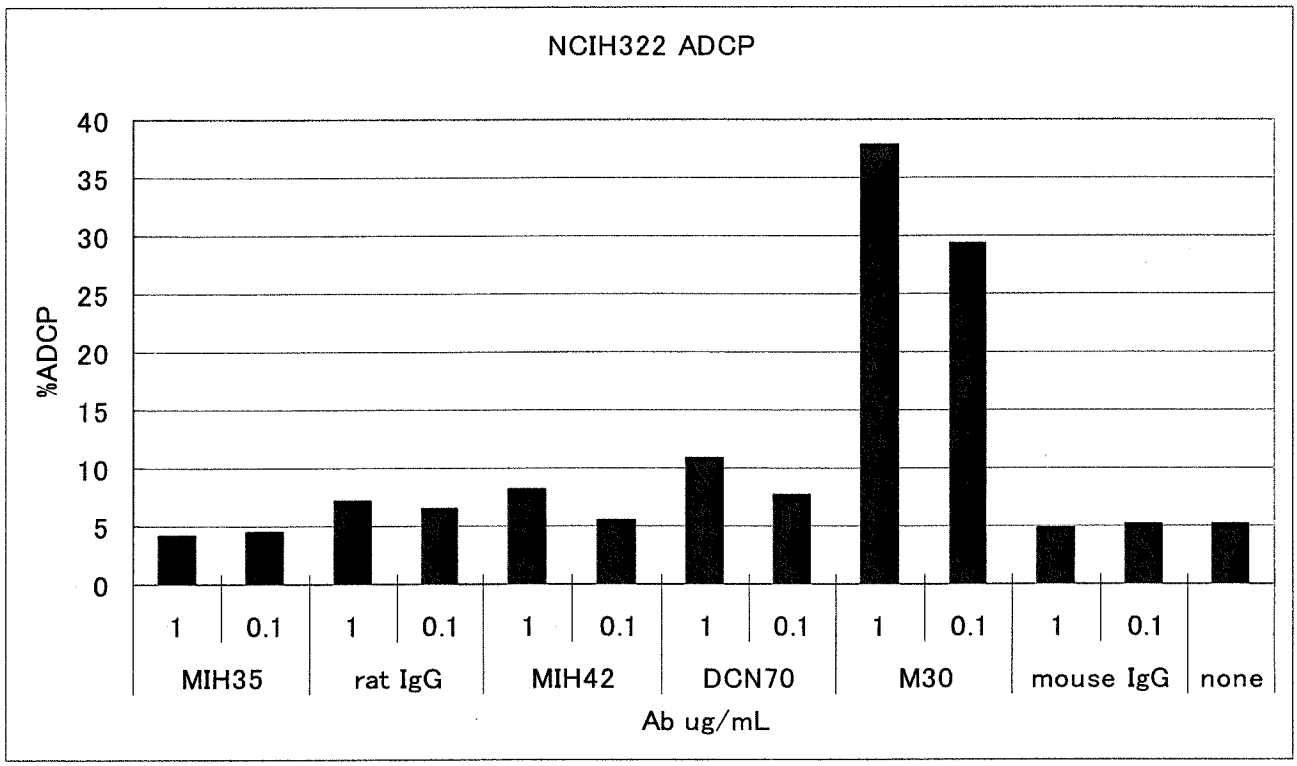
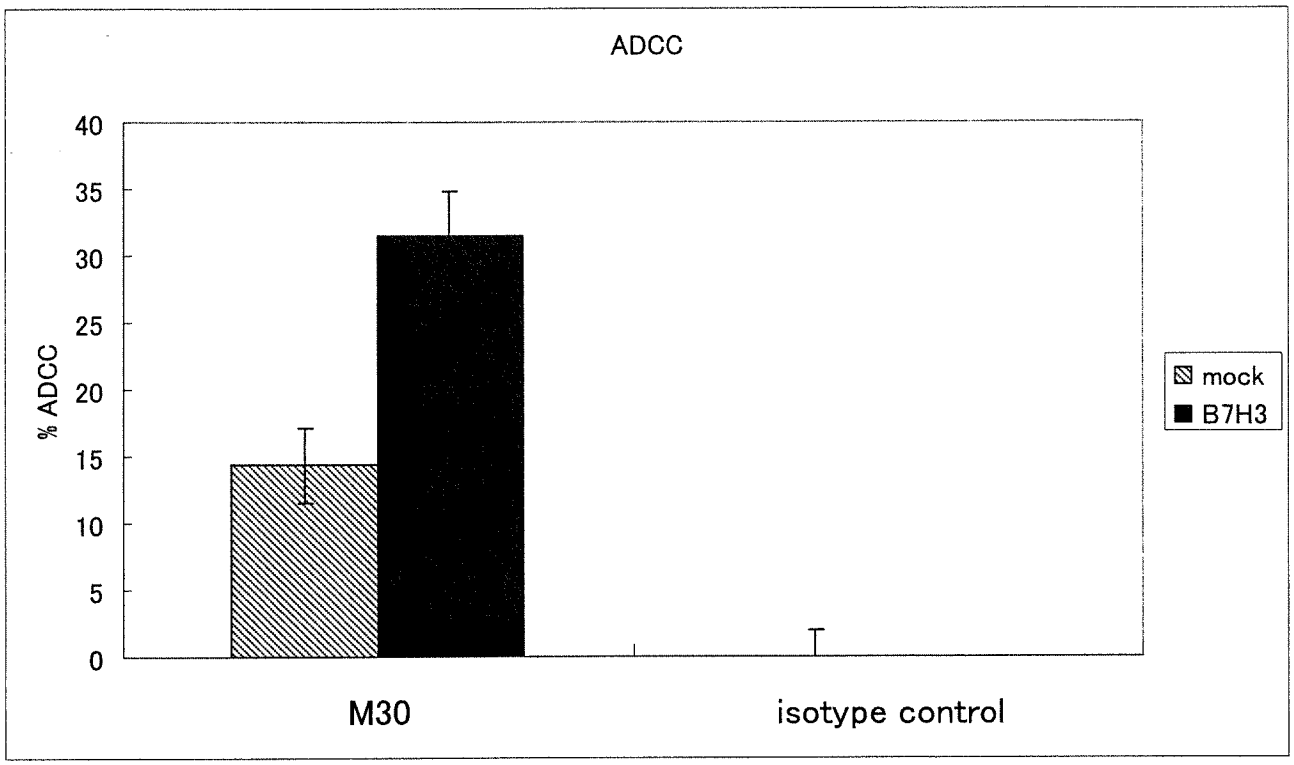
[Fig. 1]


TGC-NCIH322 ADCP
%ADCP
70
60
50
40
30
20
10
0
PBS
IgG
L7
L8
L11
M30
M31

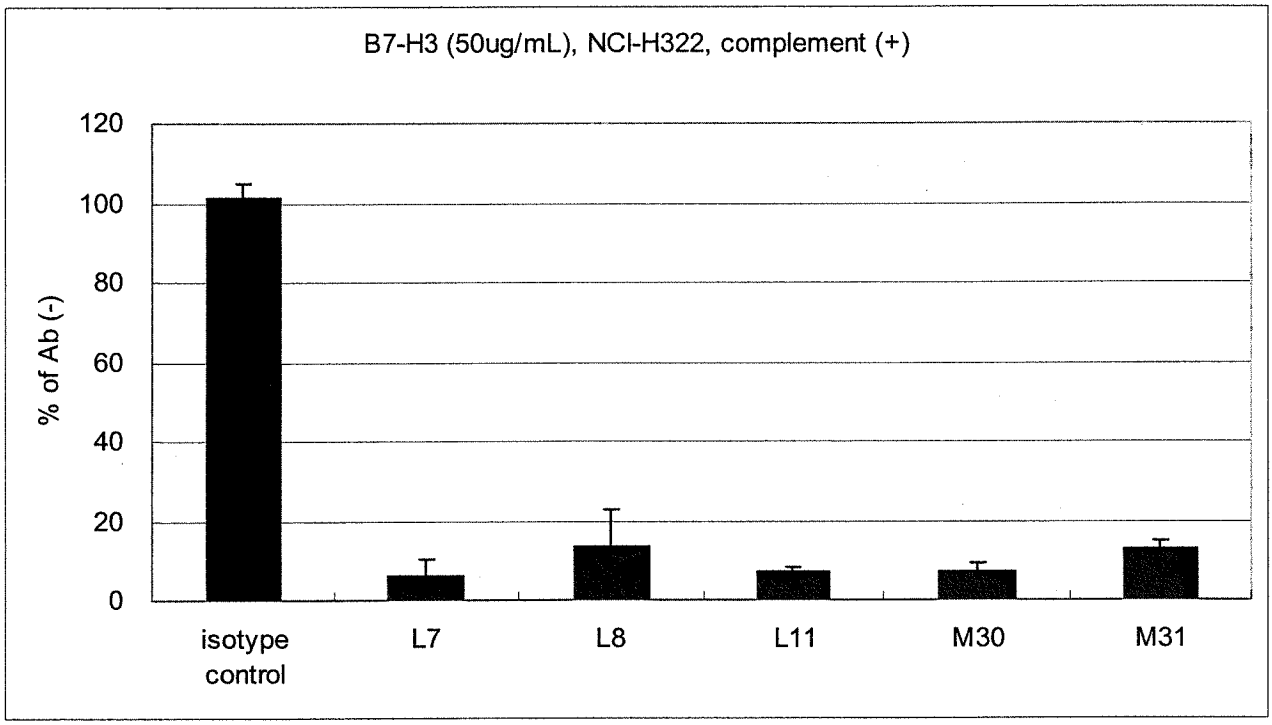
[Fig. 2]


NCIH322 ADCP
%ADCP
40
35
30
25
20
15
10
5
0
1
0.1
MIH35
rat IgG
MIH42
DCN70
M30
mouse IgG
none
Ab ug/mL

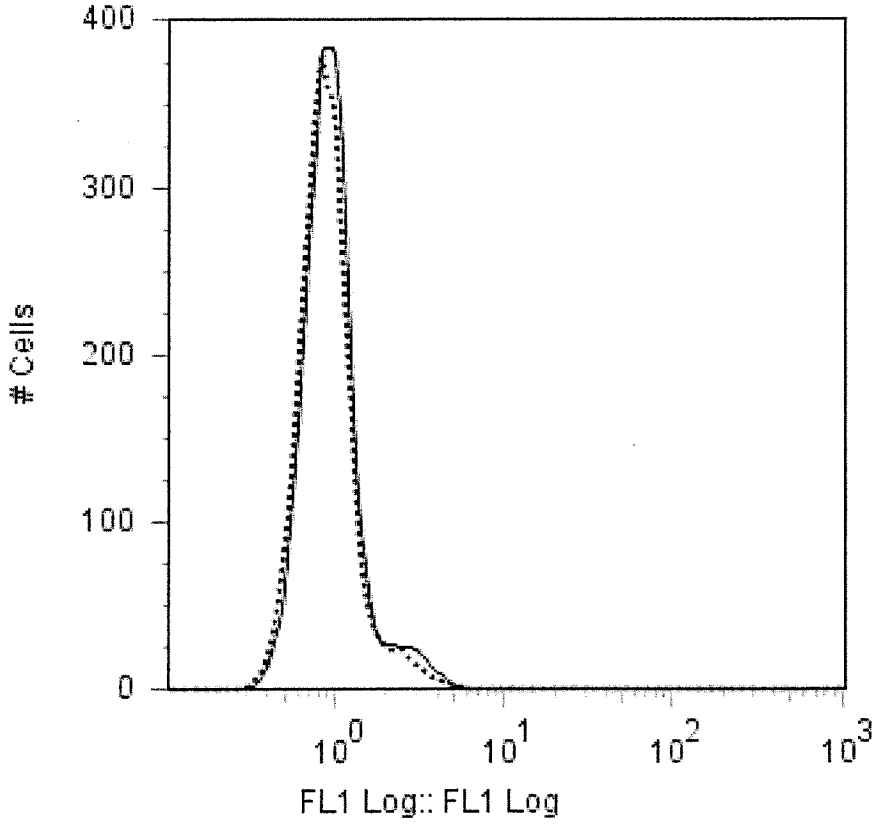
[Fig. 3]



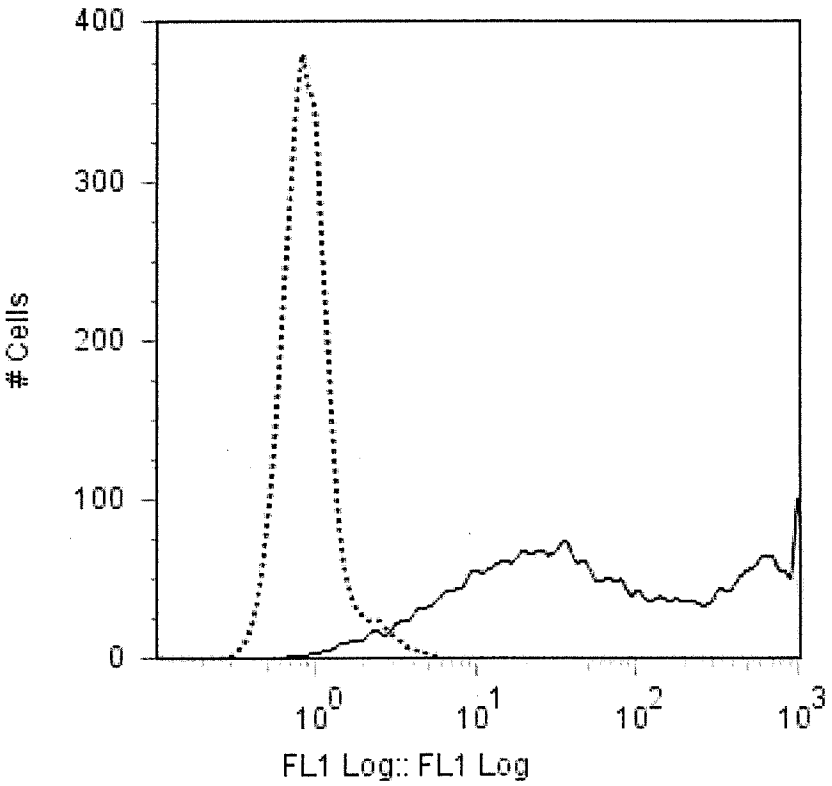
[Fig. 4]


B7-H3 (50ug/mL), NCI-H322, complement (+)
% of Ab (-)
120
100
80
60
40
20
0
isotype control
L7
L8
L11
M30
M31

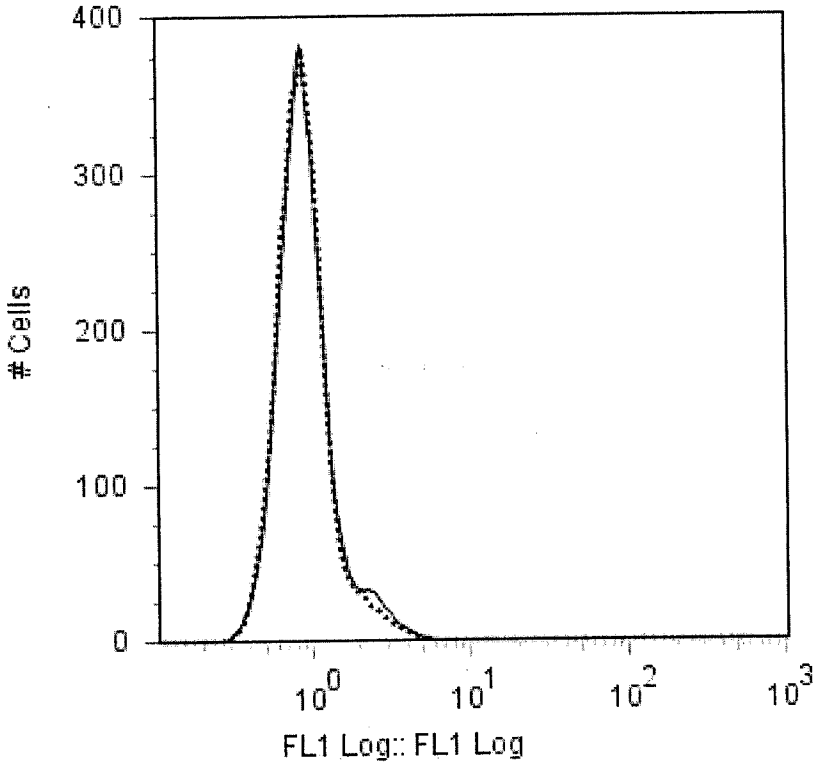
[Fig. 5-1] B7-H3 IgV1



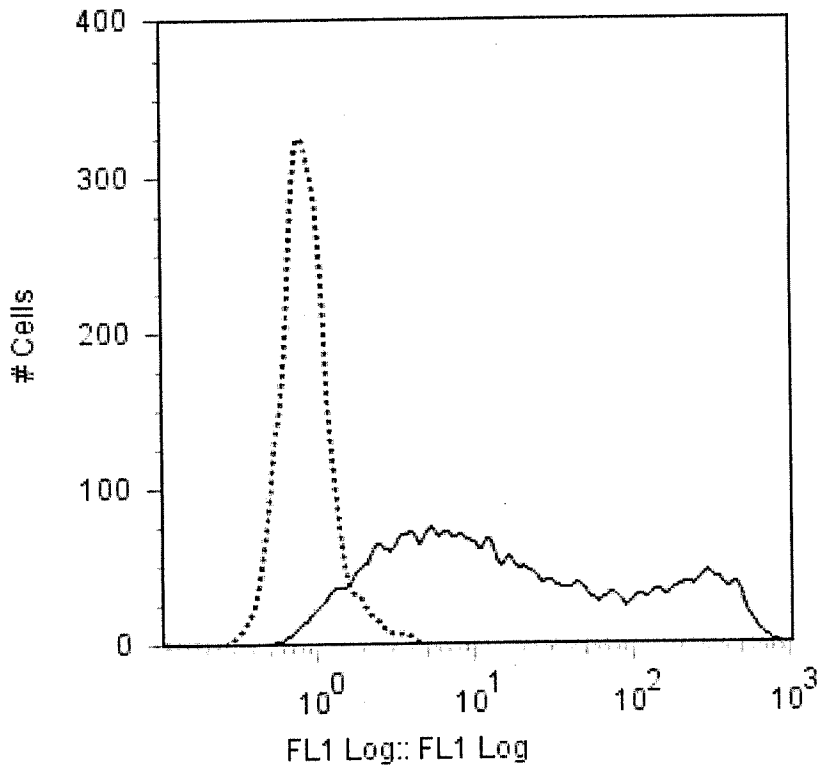
[Fig. 5-2] B7-H3 IgC1



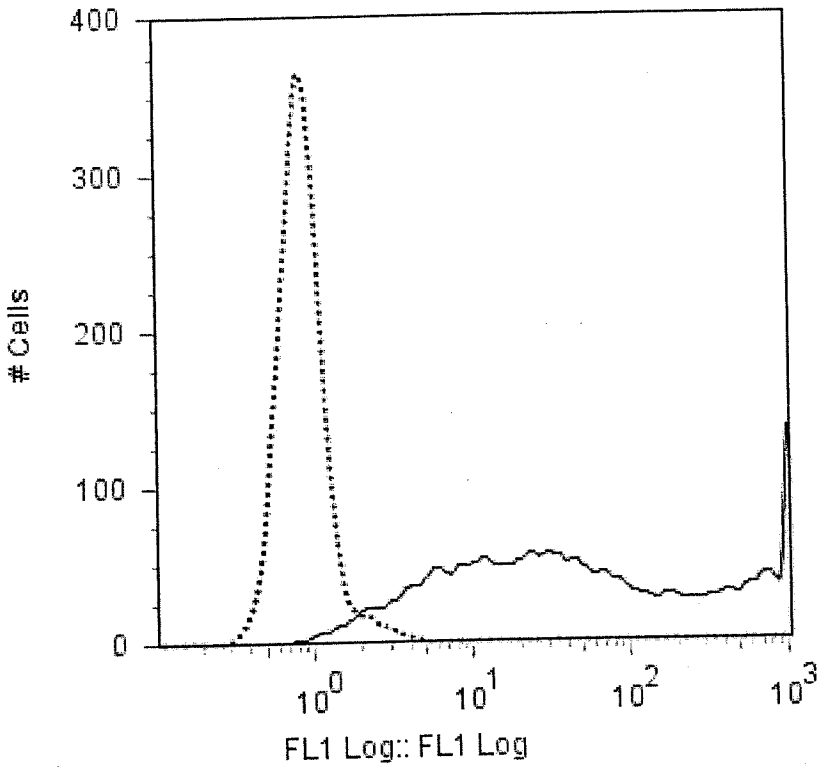
[Fig. 5-3] B7-H3 IgV2



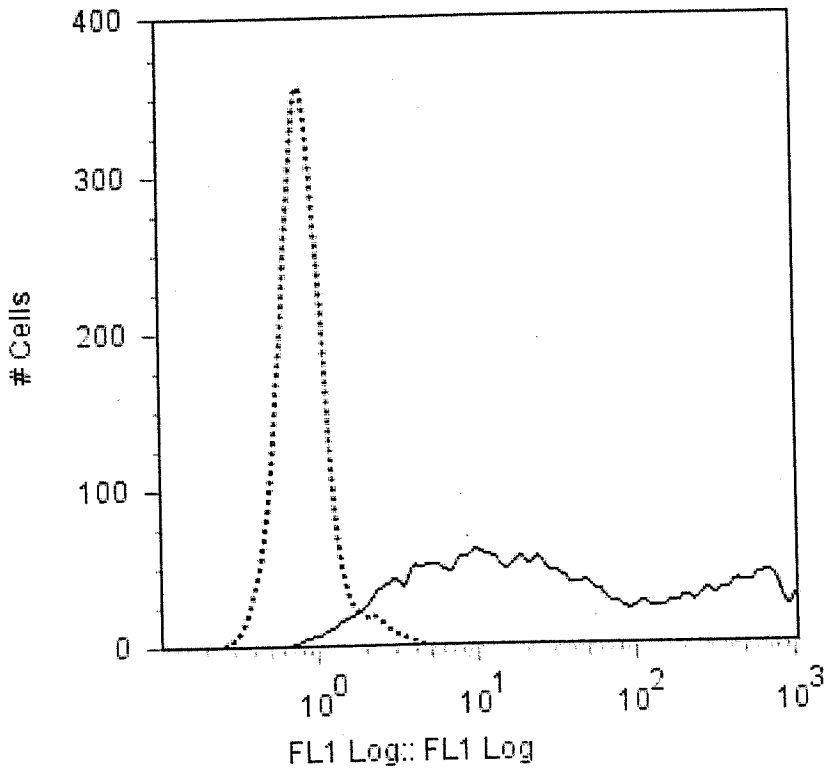
[Fig. 5-4] B7-H3 IgC2



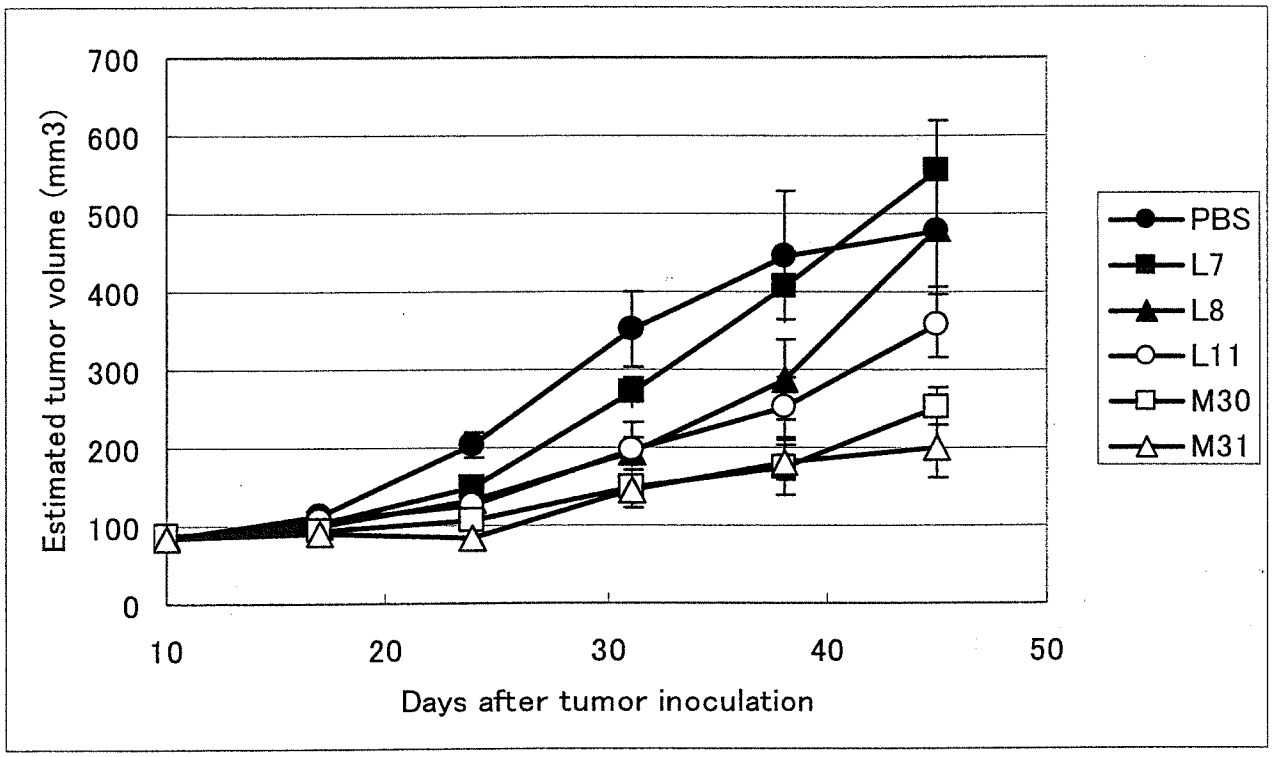
[Fig. 5-5] B7-H3 IgC1-V2-C2



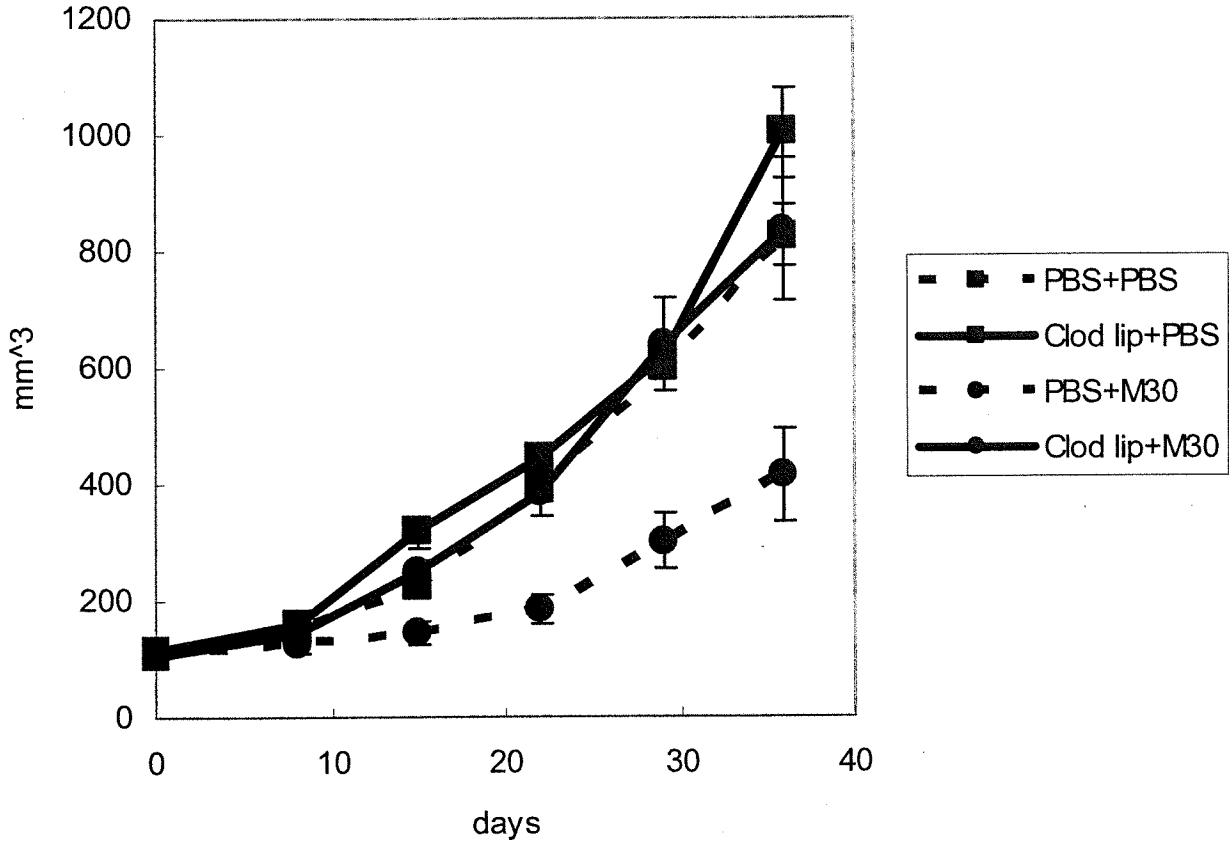
[Fig. 5-6] B7-H3 IgV2-C2



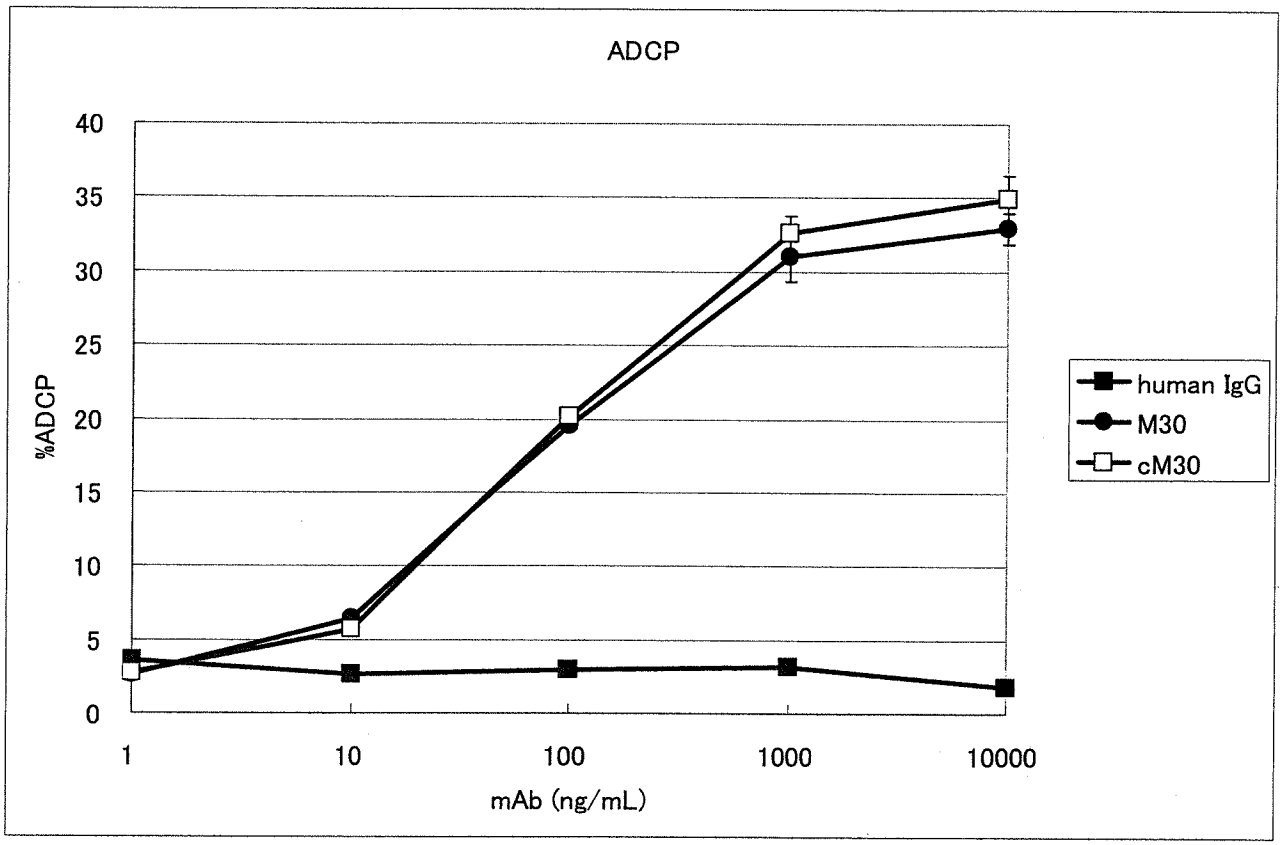
[Fig. 6]


700
600
500
400
300
200
100
0
Estimated tumor volume (mm3)
10
20
30
40
50
Days after tumor inoculation
PBS
L7
L8
L11
M30
M31

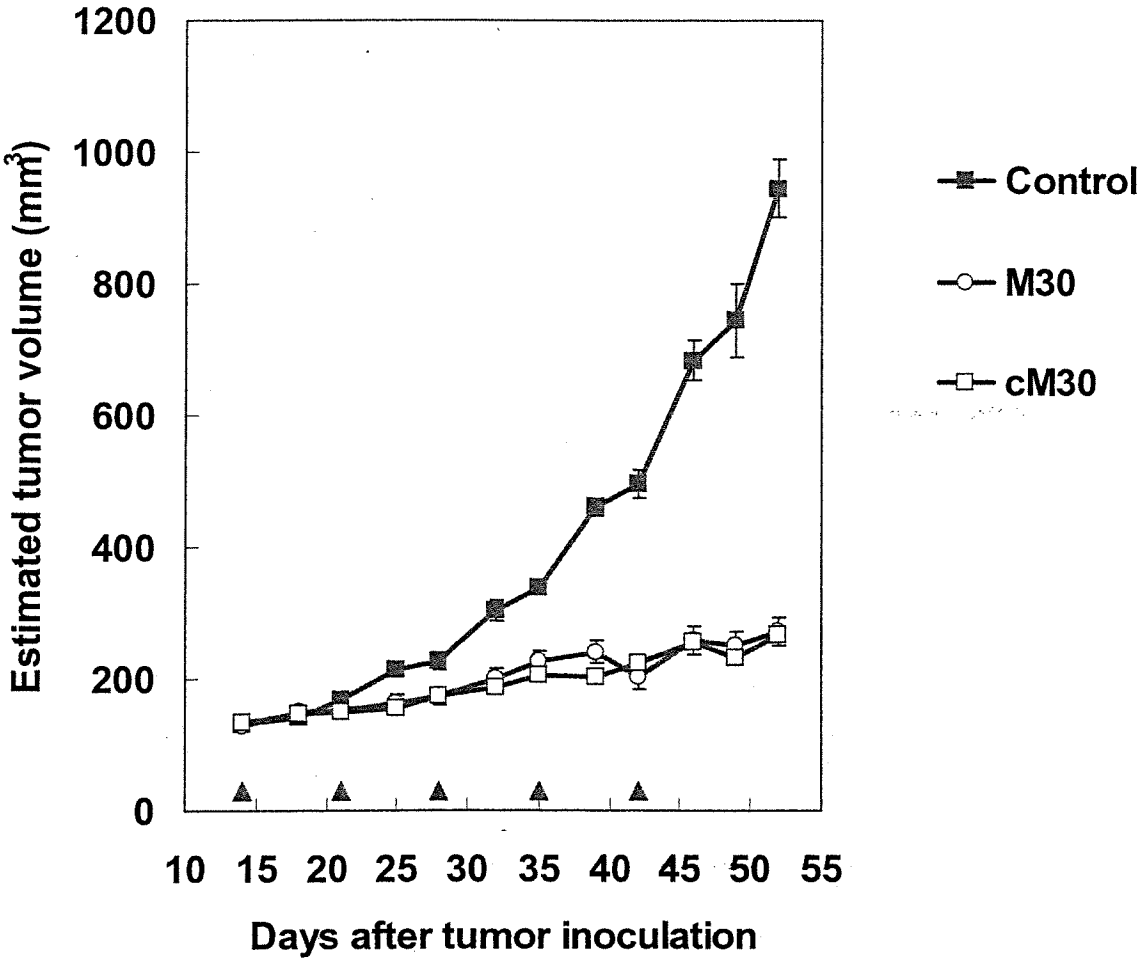
[Fig. 7]


1200
1000
800
600
400
200
0
mm^3
0
10
20
30
40
days
PBS+PBS
Clod lip+PBS
PBS+M30
Clod lip+M30

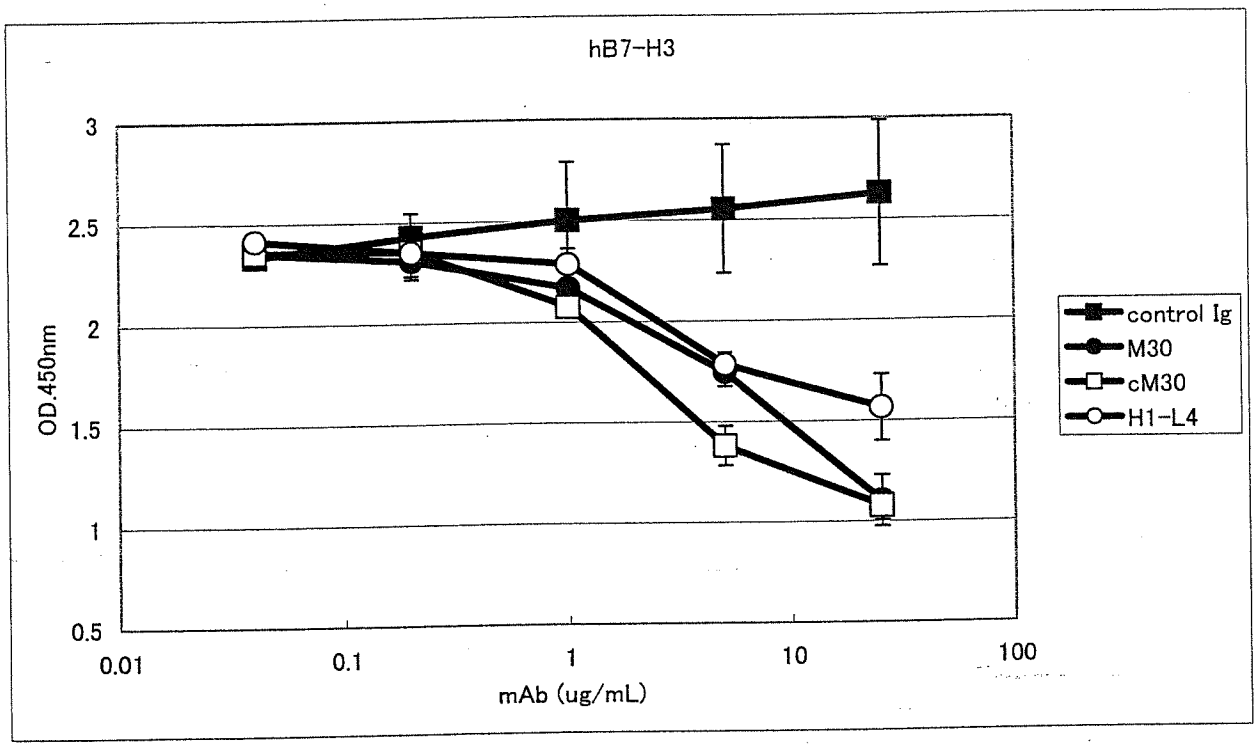
[Fig. 8]


ADCP
%ADCP
40
35
30
25
20
15
10
5
0
1
10
100
1000
10000
mAb (ng/mL)
human IgG
M30
cM30

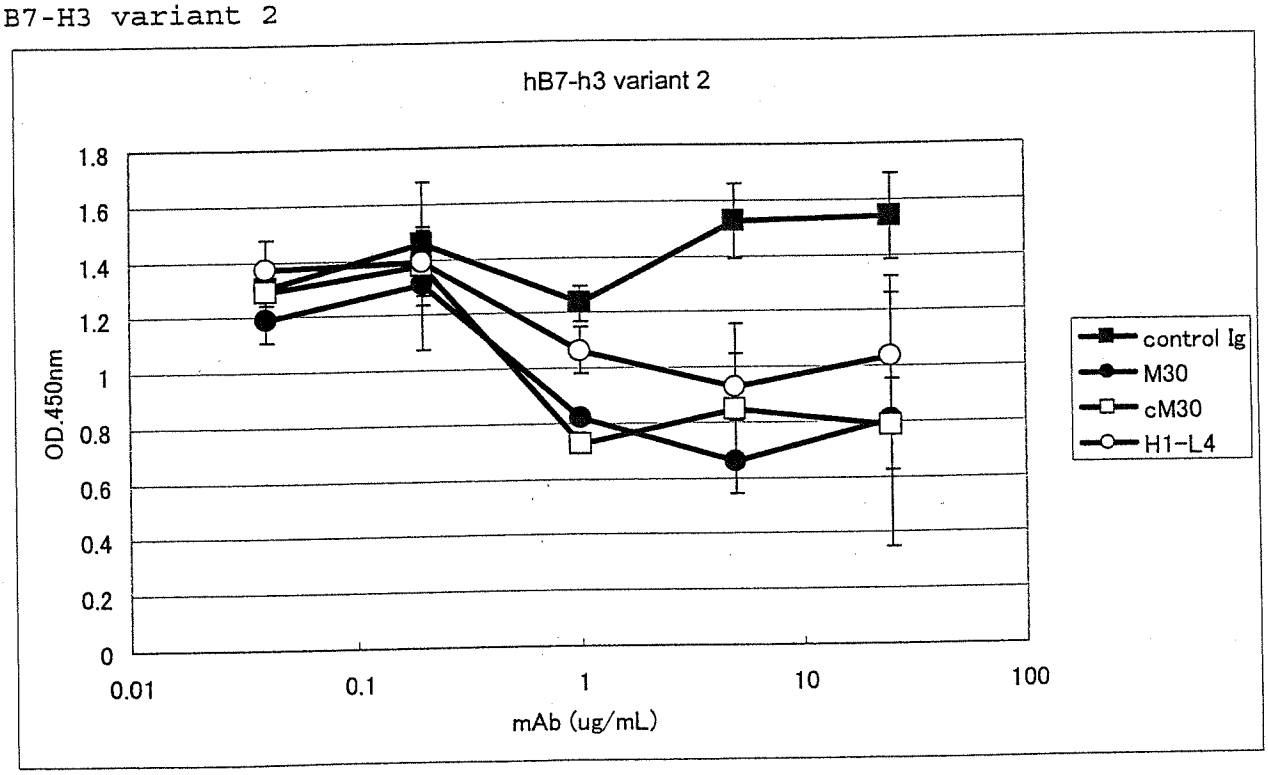
[Fig. 9]


1200
1000
800
600
400
200
0
Estimated tumor volume (mm3)
10 15 20 25 30 35 40 45 50 55
Days after tumor inoculation
Control
M30
cM30

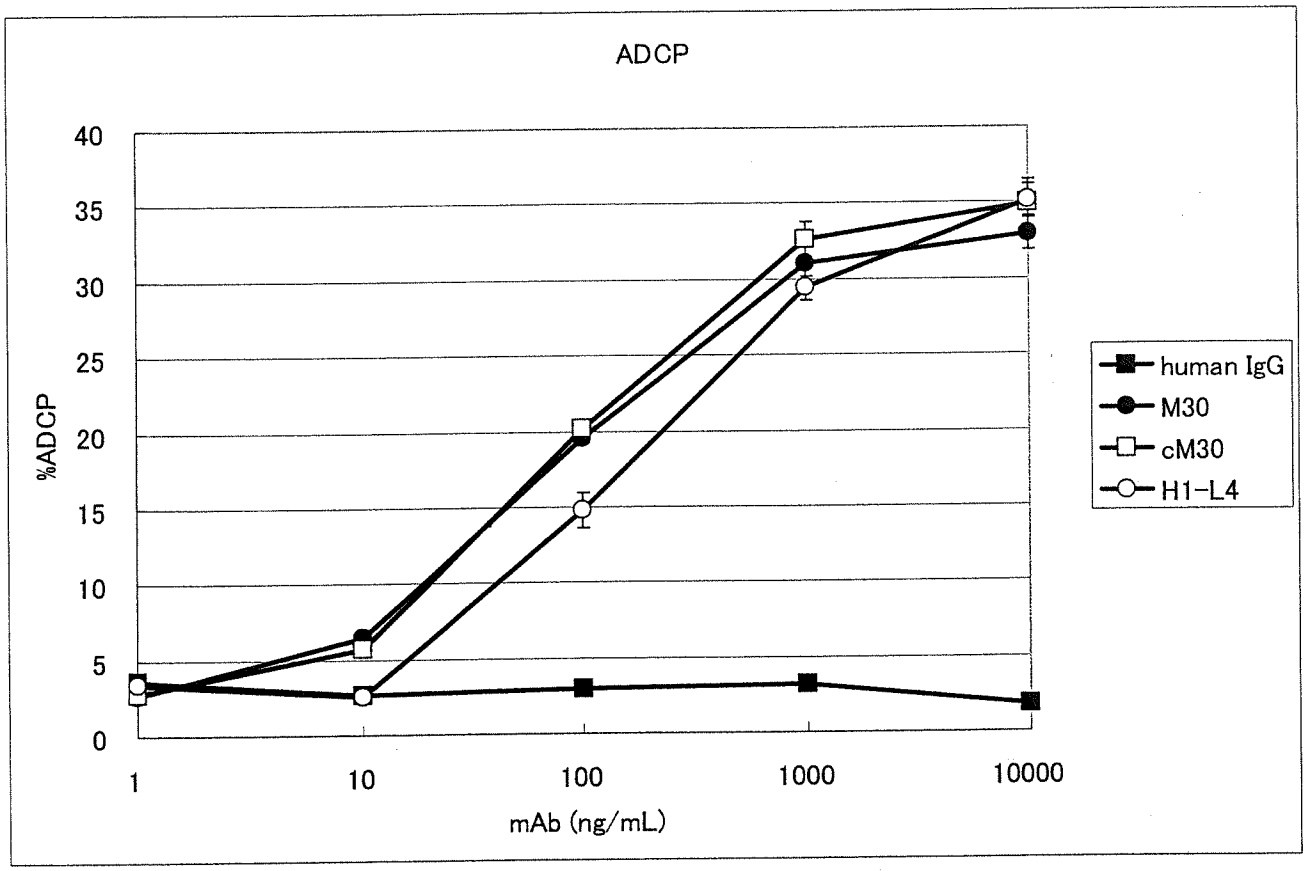
[Fig. 10-1]
B7-H3 variant 1



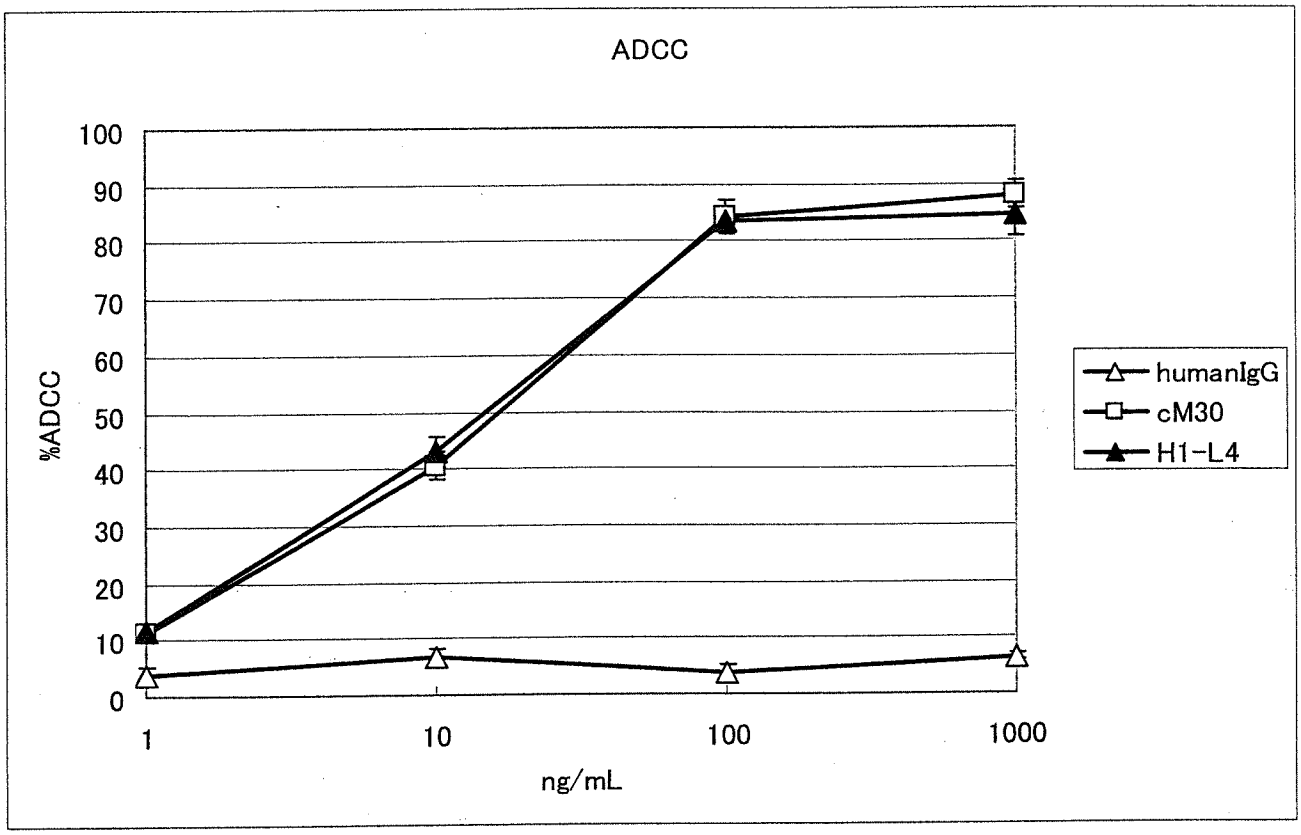
[Fig. 10-2]
B7-H3 variant 2



[Fig. 11]


ADCP
%ADCP
40
35
30
25
20
15
10
5
0
1
10
100
1000
10000
mAb (ng/mL)
human IgG
M30
cM30
H1-L4

[Fig. 12]


ADCC
100
90
80
70
60
50
40
30
20
10
0
%ADCC
1
10
100
1000
ng/mL
humanIgG
cM30
H1-L4

[Fig. 13-1]

Nucleotide sequence of B7-H3 variant 1 (SEQ ID NO: 5)

atgctgcgtcggcggggcagccctggcatgggtgtgcatgtgggtgcagccctgggagcactgtgg
ttctgcctcacaggagccctggaggtccaggtccctgaagacccagtggtggcactggtgggcacc
gatgccaccctgtgctgctccttctcccctgagcctggcttcagcctggcacagctcaacctcatc
tggcagctgacagataccaaacagctggtgcacagctttgctgagggccaggaccagggcagcgcc
tatgccaaccgcacggccctcttcccggacctgctggcacagggcaacgcatccctgaggctgcag
cgcgtgcgtgtggcggacgagggcagcttcacctgcttcgtgagcatccgggatttcggcagcgct
gccgtcagcctgcaggtggccgctccctactcgaagcccagcatgaccctggagcccaacaaggac
ctgcggccaggggacacggtgaccatcacgtgctccagctaccagggctaccctgaggctgaggtg
ttctggcaggatgggcagggtgtgcccctgactggcaacgtgaccacgtcgcagatggccaacgag
cagggcttgtttgatgtgcacagcatcctgcgggtggtgctgggtgcaaatggcacctacagctgc
ctggtgcgcaaccccgtgctgcagcaggatgcgcacagctctgtcaccatcacaccccagagaagc
cccacaggagccgtggaggtccaggtccctgaggacccggtggtggccctagtgggcaccgatgcc
accctgcgctgctccttctcccccgagcctggcttcagcctggcacagctcaacctcatctggcag
ctgacagacaccaaacagctggtgcacagtttcaccgaaggccgggaccagggcagcgcctatgcc
aaccgcacggccctcttcccggacctgctggcacaaggcaatgcatccctgaggctgcagcgcgtg
cgtgtggcggacgagggcagcttcacctgcttcgtgagcatccgggatttcggcagcgctgccgtc
agcctgcaggtggccgctccctactcgaagcccagcatgaccctggagcccaacaaggacctgcgg
ccaggggacacggtgaccatcacgtgctccagctaccggggctaccctgaggctgaggtgttctgg
caggatgggcagggtgtgcccctgactggcaacgtgaccacgtcgcagatggccaacgagcagggc
ttgtttgatgtgcacagcgtcctgcgggtggtgctgggtgcgaatggcacctacagctgcctggtg
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gctttcgtgtgctggagaaagatcaaacagagctgtgaggaggagaatgcaggagctgaggaccag
gatggggagggagaaggctccaagacagccctgcagcctctgaaacactctgacagcaaagaagat
gatggacaagaaatagcctgagcggccgccactgtgctggatatctgcagaattccaccacactgg
actagtggatccgagctcggtaccaagcttaagtttaaaccgctgatcagcctcgactgtgccttc
tagttgccagccatctgttgtttgcccctcccccgtgccttccttgaccctggaaggtgccactcc
cactgtcctttcctaataaaatgaggaaattgc

[Fig. 13-2]

Amino acid sequence of B7-H3 variant 1 (SEQ ID NO: 6)

MLRRRGSPGMGVHVGAALGALWFCLTGALEVQVPEDPVVALVGTDATLCCSFSPEPGFSLAQLNLI
WQLTDTKQLVHSFAEGQDQGSAYANRTALFPDLLAQGNASLRLQRVRVADEGSFTCFVSIRDFGSA

AVSLQVAAPYSKPSMTLEPNKDLRPGDTVTITCSSYQGYPEAEVFWQDGQGVPLTGNVTTSQMANE
QGLFDVHSILRVVLGANGTYSCLVRNPVLQQDAHSSVTITPQRSPTGAVEVQVPEDPVVALVGTDA
TLRCSFSPEPGFSLAQLNLIWQLTDTKQLVHSFTEGRDQGSAYANRTALFPDLLAQGNASLRLQRV
RVADEGSFTCFVSIRDFGSAAVSLQVAAPYSKPSMTLEPNKDLRPGDTVTITCSSYRGYPEAEVFW
QDGQGVPLTGNVTTSQMANEQGLFDVHSVLRVVLGANGTYSCLVRNPVLQQDAHGSVTITGQPMTF
PPEALWVTVGLSVCLIALLVALAFVCWRKIKQSCEEENAGAEDQDGEGEGSKTALQPLKHSDSKED
DGQEIA

[Fig. 14-1]

Nucleotide sequence of B7-H3 variant 2 (SEQ ID NO: 9)

atgctgcgtcggcggggcagccctggcatgggtgtgcatgtgggtgcagccctgggagcactgtgg
ttctgcctcacaggagccctggaggtccaggtccctgaagacccagtggtggcactggtgggcacc
gatgccaccctgtgctgctccttctcccctgagcctggcttcagcctggcacagctcaacctcatc
tggcagctgacagataccaaacagctggtgcacagctttgctgagggccaggaccagggcagcgcc
tatgccaaccgcacggccctcttcccggacctgctggcacagggcaacgcatccctgaggctgcag
cgcgtgcgtgtggcggacgagggcagcttcacctgcttcgtgagcatccgggatttcggcagcgct
gccgtcagcctgcaggtggccgctccctactcgaagcccagcatgaccctggagcccaacaaggac
ctgcggccaggggacacggtgaccatcacgtgctccagctaccggggctaccctgaggctgaggtg
ttctggcaggatgggcagggtgtgcccctgactggcaacgtgaccacgtcgcagatggccaacgag
cagggcttgtttgatgtgcacagcgtcctgcgggtggtgctgggtgcgaatggcacctacagctgc
ctggtgcgcaaccccgtgctgcagcaggatgcgcacggctctgtcaccatcacagggcagcctatg
acattcccccagaggccctgtgggtgaccgtggggctgtctgtctgtctcattgcactgctggtg
gccctggctttcgtgtgctggagaaagatcaaacagagctgtgaggaggagaatgcaggagctgag
gaccaggatggggagggagaaggctccaagacagccctgcagcctctgaaacactctgacagcaaa
gaagatgatggacaagaaatagcc

[Fig. 14-2]

Amino acid sequence of B7-H3 variant 2 (SEQ ID NO: 10)

MLRRRGSPGMGVHVGAALGALWFCLTGALEVQVPEDPVVALVGTDATLCCSFSPEPGFSLAQLNLI
WQLTDTKQLVHSFAEGQDQGSAYANRTALFPDLLAQGNASLRLQRVRVADEGSFTCFVSIRDFGSA
AVSLQVAAPYSKPSMTLEPNKDLRPGDTVTITCSSYRGYPEAEVFWQDGQGVPLTGNVTTSQMANE
QGLFDVHSVLRVVLGANGTYSCLVRNPVLQQDAHGSVTITGQPMTFPPEALWVTVGLSVCLIALLV
ALAFVCWRKIKQSCEEENAGAEDQDGEGEGSKTALQPLKHSDSKEDDGQEIA

[Fig. 15-1]

Nucleotide sequence of B7-H3 IgV1 (SEQ ID NO: 20)

GGAGCCCTGGAGGTCCAGGTCCCTGAAGACCCAGTGGTGGCACTGGTGGGCACCGATGCCACCCTG
TGCTGCTCCTTCTCCCCTGAGCCTGGCTTCAGCCTGGCACAGCTCAACCTCATCTGGCAGCTGACA
GATACCAAACAGCTGGTGCACAGCTTTGCTGAGGGCCAGGACCAGGGCAGCGCCTATGCCAACCGC
ACGGCCCTCTTCCCGGACCTGCTGGCACAGGGCAACGCATCCCTGAGGCTGCAGCGCGTGCGTGTG
GCGGACGAGGGCAGCTTCACCTGCTTCGTGAGCATCCGGGATTTCGGCAGCGCTGCCGTCAGCCTG
CAGGTGGCCGGGCAGCCTATGACATTCCCCCCAGAGGCCCTGTGGGTGACCGTGGGGCTGTCTGTC
TGTCTCATTGCACTGCTGGTGGCCCTGGCTTTCGTGTGCTGGAGAAAGATCAAACAGAGCTGTGAG
GAGGAGAATGCAGGAGCTGAGGACCAGGATGGGGAGGGAGAAGGCTCCAAGACAGCCCTGCAGCCT
CTGAAACACTCTGACAGCAAAGAAGATGATGGACAAGAAATAGCCTGA

[Fig. 15-2]

Amino acid sequence of B7-H3 IgV1 (SEQ ID NO: 21)

GALEVQVPEDPVVALVGTDATLCCSFSPEPGFSLAQLNLIWQLTDTKQLVHSFAEGQDQGSAYANR
TALFPDLLAQGNASLRLQRVRVADEGSFTCFVSIRDFGSAAVSLQVAGQPMTFPPEALWVTVGLSV
CLIALLVALAFVCWRKIKQSCEEENAGAEDQDGEGEGSKTALQPLKHSDSKEDDGQEIA

[Fig. 16-1]

Nucleotide sequence of B7-H3 IgC1 (SEQ ID NO: 22)

GCTCCCTACTCGAAGCCCAGCATGACCCTGGAGCCCAACAAGGACCTGCGGCCAGGGGACACGGTG
ACCATCACGTGCTCCAGCTACCAGGGCTACCCTGAGGCTGAGGTGTTCTGGCAGGATGGGCAGGGT
GTGCCCCTGACTGGCAACGTGACCACGTCGCAGATGGCCAACGAGCAGGGCTTGTTTGATGTGCAC
AGCATCCTGCGGGTGGTGCTGGGTGCAAATGGCACCTACAGCTGCCTGGTGCGCAACCCCGTGCTG
CAGCAGGATGCGCACAGCTCTGTCACCATCACACCCCAGAGAAGCCCCACAGGGCAGCCTATGACA
TTCCCCCCAGAGGCCCTGTGGGTGACCGTGGGGCTGTCTGTCTGTCTCATTGCACTGCTGGTGGCC
CTGGCTTTCGTGTGCTGGAGAAAGATCAAACAGAGCTGTGAGGAGGAGAATGCAGGAGCTGAGGAC
CAGGATGGGGAGGGAGAAGGCTCCAAGACAGCCCTGCAGCCTCTGAAACACTCTGACAGCAAAGAA
GATGATGGACAAGAAATAGCCTGA

[Fig. 16-2]

Amino acid sequence of B7-H3 IgC1 (SEQ ID NO: 23)

APYSKPSMTLEPNKDLRPGDTVTITCSSYQGYPEAEVFWQDGQGVPLTGNVTTSQMANEQGLFDVH
SILRVVLGANGTYSCLVRNPVLQQDAHSSVTITPQRSPTGQPMTFPPEALWVTVGLSVCLIALLVA
LAFVCWRKIKQSCEEENAGAEDQDGEGEGSKTALQPLKHSDSKEDDGQEIA

[Fig. 17-1]

Nucleotide sequence of B7-H3 IgV2 (SEQ ID NO: 24)

GGAGCCGTGGAGGTCCAGGTCCCTGAGGACCCGGTGGTGGCCCTAGTGGGCACCGATGCCACCCTG
CGCTGCTCCTTCTCCCCCGAGCCTGGCTTCAGCCTGGCACAGCTCAACCTCATCTGGCAGCTGACA
GACACCAAACAGCTGGTGCACAGTTTCACCGAAGGCCGGGACCAGGGCAGCGCCTATGCCAACCGC
ACGGCCCTCTTCCCGGACCTGCTGGCACAAGGCAATGCATCCCTGAGGCTGCAGCGCGTGCGTGTG
GCGGACGAGGGCAGCTTCACCTGCTTCGTGAGCATCCGGGATTTCGGCAGCGCTGCCGTCAGCCTG
CAGGTGGCCGGGCAGCCTATGACATTCCCCCCAGAGGCCCTGTGGGTGACCGTGGGGCTGTCTGTC
TGTCTCATTGCACTGCTGGTGGCCCTGGCTTTCGTGTGCTGGAGAAAGATCAAACAGAGCTGTGAG
GAGGAGAATGCAGGAGCTGAGGACCAGGATGGGGAGGGAGAAGGCTCCAAGACAGCCCTGCAGCCT
CTGAAACACTCTGACAGCAAAGAAGATGATGGACAAGAAATAGCCTGA

[Fig. 17-2]

Amino acid sequence of B7-H3 IgV2 (SEQ ID NO: 25)

GAVEVQVPEDPVVALVGTDATLRCSFSPEPGFSLAQLNLIWQLTDTKQLVHSFTEGRDQGSAYANR
TALFPDLLAQGNASLRLQRVRVADEGSFTCFVSIRDFGSAAVSLQVAGQPMTFPPEALWVTVGLSV
CLIALLVALAFVCWRKIKQSCEEENAGAEDQDGEGEGSKTALQPLKHSDSKEDDGQEIA

[Fig. 18-1]

Nucleotide sequence of B7-H3 IgC2 (SEQ ID NO: 26)

GCTCCCTACTCGAAGCCCAGCATGACCCTGGAGCCCAACAAGGACCTGCGGCCAGGGGACACGGTG
ACCATCACGTGCTCCAGCTACCGGGGCTACCCTGAGGCTGAGGTGTTCTGGCAGGATGGGCAGGGT
GTGCCCCTGACTGGCAACGTGACCACGTCGCAGATGGCCAACGAGCAGGGCTTGTTTGATGTGCAC
AGCGTCCTGCGGGTGGTGCTGGGTGCGAATGGCACCTACAGCTGCCTGGTGCGCAACCCCGTGCTG
CAGCAGGATGCGCACGGCTCTGTCACCATCACAGGGCAGCCTATGACATTCCCCCCAGAGGCCCTG
TGGGTGACCGTGGGGCTGTCTGTCTGTCTCATTGCACTGCTGGTGGCCCTGGCTTTCGTGTGCTGG
AGAAAGATCAAACAGAGCTGTGAGGAGGAGAATGCAGGAGCTGAGGACCAGGATGGGGAGGGAGAA
GGCTCCAAGACAGCCCTGCAGCCTCTGAAACACTCTGACAGCAAAGAAGATGATGGACAAGAAATA
GCCTGA

[Fig. 18-2]

Amino acid sequence of B7-H3 IgC2 (SEQ ID NO: 27)

APYSKPSMTLEPNKDLRPGDTVTITCSSYRGYPEAEVFWQDGQGVPLTGNVTTSQMANEQGLFDVH
SVLRVVLGANGTYSCLVRNPVLQQDAHGSVTITGQPMTFPPEALWVTVGLSVCLIALLVALAFVCW
RKIKQSCEEENAGAEDQDGEGEGSKTALQPLKHSDSKEDDGQEIA

[Fig. 19-1]

Nucleotide sequence of B7-H3 IgC1-V2-C2 (SEQ ID NO: 28)

GCTCCCTACTCGAAGCCCAGCATGACCCTGGAGCCCAACAAGGACCTGCGGCCAGGGGACACGGTG
ACCATCACGTGCTCCAGCTACCAGGGCTACCCTGAGGCTGAGGTGTTCTGGCAGGATGGGCAGGGT
GTGCCCCTGACTGGCAACGTGACCACGTCGCAGATGGCCAACGAGCAGGGCTTGTTTGATGTGCAC
AGCATCCTGCGGGTGGTGCTGGGTGCAAATGGCACCTACAGCTGCCTGGTGCGCAACCCCGTGCTG
CAGCAGGATGCGCACAGCTCTGTCACCATCACACCCCAGAGAAGCCCCACAGGAGCCGTGGAGGTC
CAGGTCCCTGAGGACCCGGTGGTGGCCCTAGTGGGCACCGATGCCACCCTGCGCTGCTCCTTCTCC
CCCGAGCCTGGCTTCAGCCTGGCACAGCTCAACCTCATCTGGCAGCTGACAGACACCAAACAGCTG
GTGCACAGTTTCACCGAAGGCCGGGACCAGGGCAGCGCCTATGCCAACCGCACGGCCCTCTTCCCG
GACCTGCTGGCACAAGGCAATGCATCCCTGAGGCTGCAGCGCGTGCGTGTGGCGGACGAGGGCAGC
TTCACCTGCTTCGTGAGCATCCGGGATTTCGGCAGCGCTGCCGTCAGCCTGCAGGTGGCCGCTCCC
TACTCGAAGCCCAGCATGACCCTGGAGCCCAACAAGGACCTGCGGCCAGGGGACACGGTGACCATC
ACGTGCTCCAGCTACCGGGGCTACCCTGAGGCTGAGGTGTTCTGGCAGGATGGGCAGGGTGTGCCC
CTGACTGGCAACGTGACCACGTCGCAGATGGCCAACGAGCAGGGCTTGTTTGATGTGCACAGCGTC
CTGCGGGTGGTGCTGGGTGCGAATGGCACCTACAGCTGCCTGGTGCGCAACCCCGTGCTGCAGCAG
GATGCGCACGGCTCTGTCACCATCACAGGGCAGCCTATGACATTCCCCCCAGAGGCCCTGTGGGTG
ACCGTGGGGCTGTCTGTCTGTCTCATTGCACTGCTGGTGGCCCTGGCTTTCGTGTGCTGGAGAAAG
ATCAAACAGAGCTGTGAGGAGGAGAATGCAGGAGCTGAGGACCAGGATGGGGAGGGAGAAGGCTCC
AAGACAGCCCTGCAGCCTCTGAAACACTCTGACAGCAAAGAAGATGATGGACAAGAAATAGCCTGA

[Fig. 19-2]

Amino acid sequence of B7-H3 IgC1-V2-C2 (SEQ ID NO: 29)

APYSKPSMTLEPNKDLRPGDTVTITCSSYQGYPEAEVFWQDGQGVPLTGNVTTSQMANEQGLFDVH
SILRVVLGANGTYSCLVRNPVLQQDAHSSVTITPQRSPTGAVEVQVPEDPVVALVGTDATLRCSFS
PEPGFSLAQLNLIWQLTDTKQLVHSFTEGRDQGSAYANRTALFPDLLAQGNASLRLQRVRVADEGS
FTCFVSIRDFGSAAVSLQVAAPYSKPSMTLEPNKDLRPGDTVTITCSSYRGYPEAEVFWQDGQGVP
LTGNVTTSQMANEQGLFDVHSVLRVVLGANGTYSCLVRNPVLQQDAHGSVTITGQPMTFPPEALWV
TVGLSVCLIALLVALAFVCWRKIKQSCEEENAGAEDQDGEGEGSKTALQPLKHSDSKEDDGQEIA

[Fig. 20-1]

Nucleotide sequence of B7-H3 IgV2-C2 (SEQ ID NO: 30)

GGAGCCGTGGAGGTCCAGGTCCCTGAGGACCCGGTGGTGGCCCTAGTGGGCACCGATGCCACCCTG
CGCTGCTCCTTCTCCCCCGAGCCTGGCTTCAGCCTGGCACAGCTCAACCTCATCTGGCAGCTGACA
GACACCAAACAGCTGGTGCACAGTTTCACCGAAGGCCGGGACCAGGGCAGCGCCTATGCCAACCGC
ACGGCCCTCTTCCCGGACCTGCTGGCACAAGGCAATGCATCCCTGAGGCTGCAGCGCGTGCGTGTG
GCGGACGAGGGCAGCTTCACCTGCTTCGTGAGCATCCGGGATTTCGGCAGCGCTGCCGTCAGCCTG
CAGGTGGCCGCTCCCTACTCGAAGCCCAGCATGACCCTGGAGCCCAACAAGGACCTGCGGCCAGGG
GACACGGTGACCATCACGTGCTCCAGCTACCGGGGCTACCCTGAGGCTGAGGTGTTCTGGCAGGAT
GGGCAGGGTGTGCCCCTGACTGGCAACGTGACCACGTCGCAGATGGCCAACGAGCAGGGCTTGTTT
GATGTGCACAGCGTCCTGCGGGTGGTGCTGGGTGCGAATGGCACCTACAGCTGCCTGGTGCGCAAC
CCCGTGCTGCAGCAGGATGCGCACGGCTCTGTCACCATCACAGGGCAGCCTATGACATTCCCCCCA
GAGGCCCTGTGGGTGACCGTGGGGCTGTCTGTCTGTCTCATTGCACTGCTGGTGGCCCTGGCTTTC
GTGTGCTGGAGAAAGATCAAACAGAGCTGTGAGGAGGAGAATGCAGGAGCTGAGGACCAGGATGGG
GAGGGAGAAGGCTCCAAGACAGCCCTGCAGCCTCTGAAACACTCTGACAGCAAAGAAGATGATGGA
CAAGAAATAGCCTGA

[Fig. 20-2]

Amino acid sequence of B7-H3 IgV2-C2 (SEQ ID NO: 31)

GAVEVQVPEDPVVALVGTDATLRCSFSPEPGFSLAQLNLIWQLTDTKQLVHSFTEGRDQGSAYANR
TALFPDLLAQGNASLRLQRVRVADEGSFTCFVSIRDFGSAAVSLQVAAPYSKPSMTLEPNKDLRPG
DTVTITCSSYRGYPEAEVFWQDGQGVPLTGNVTTSQMANEQGLFDVHSVLRVVLGANGTYSCLVRN
PVLQQDAHGSVTITGQPMTFPPEALWVTVGLSVCLIALLVALAFVCWRKIKQSCEEENAGAEDQDG
EGEGSKTALQPLKHSDSKEDDGQEIA

[Fig. 21-1]

Nucleotide sequence of M30 antibody heavy chain (SEQ ID NO: 50)

atggaatggagttggatatttctctttctcctgtcaggaactgcaggtgtccactctgaggtccag
ctgcagcagtctggacctgagctggtaaagcctggggcttcagtgaagatgtcctgcaaggcttct
ggatacacattcactaactatgttatgcactgggtgaagcagaagcctgggcagggccttgagtgg
attggatatattaatccttacaatgatgatgttaagtacaatgagaagttcaaaggcaaggccaca
cagacttcagacaaatcctccagcacagcctacatggagctcagcagcctgacctctgaggactct
gcggtctattactgtgcaagatgggggtactacggtagtcccttatactactttgactactggggc
caaggcaccactctcacagtctcctcagccaaaacaacagccccatcggtctatccactggcccct
gtgtgtggagatacaactggctcctcggtgactctaggatgcctggtcaagggttatttccctgag
ccagtgaccttgacctggaactctggatccctgtccagtggtgtgcacaccttcccagctgtcctg
cagtctgacctctacaccctcagcagctcagtgactgtaacctcgagcacctggcccagccagtcc
atcacctgcaatgtggcccacccggcaagcagcaccaaggtggacaagaaaattgagcccagaggg
cccacaatcaagccctgtcctccatgcaaatgcccagcacctaacctcttgggtggaccatccgtc
ttcatcttccctccaaagatcaaggatgtactcatgatctccctgagccccatagtcacatgtgtg
gtggtggatgtgagcgaggatgacccagatgtccagatcagctggtttgtgaacaacgtggaagta
cacacagctcagacacaaacccatagaggaggattacaacagtactctccgggtggtcagtgccctc
cccatccagcaccaggactggatgagtggcaaggagttcaaatgcaaggtcaacaacaaagacctc
ccagcgcccatcgagagaaccatctcaaaacccaaagggtcagtaagagctccacaggtatatgtc
ttgcctccaccagaagaagagatgactaagaaacaggtcactctgacctgcatggtcacagacttc
atgcctgaagacatttacgtggagtggaccaacaacgggaaaacagagctaaactacaagaacact
gaaccagtcctggactctgatggttcttacttcatgtacagcaagctgagagtggaaaagaagaac
tgggtggaaagaaatagctactcctgttcagtggtccacgagggtctgcacaatcaccacacgact
aagagcttctcccggactccgggtaaa

[Fig. 21-2]

Amino acid sequence of M30 antibody heavy chain (SEQ ID NO: 51)

MEWSWIFLFLLSGTAGVHSEVQLQQSGPELVKPGASVKMSCKASGYTFTNYVMHWVKQKPGQGLEW
IGYINPYNDDVKYNEKFKGKATQTSDKSSSTAYMELSSLTSEDSAVYYCARWGYYGSPLYYFDYWG
QGTTLTVSSAKTTAPSVYPLAPVCGDTTGSSVTLGCLVKGYFPEPVTLTWNSGSLSSGVHTFPAVL
QSDLYTLSSSVTVTSSTWPSQSITCNVAHPASSTKVDKKIEPRGPTIKPCPPCKCPAPNLLGGPSV
FIFPPKIKDVLMISLSPIVTCVVVDVSEDDPDVQISWFVNNVEVHTAQTQTHREDYNSTLRVVSAL
PIQHQDWMSGKEFKCKVNNKDLPAPIERTISKPKGSVRAPQVYVLPPPEEEMTKKQVTLTCMVTDF
MPEDIYVEWTNNGKTELNYKNTEPVLDSDGSYFMYSKLRVEKKNWVERNSYSCSVVHEGLHNHHTT
KSFSRTPGK

[Fig. 22-1]

Nucleotide sequence of M30 antibody light chain (SEQ ID NO: 52)

atggattttctggtgcagattttcagcttcctgctaatcagtgcttcagtcataatgtccagagga
caaattgttctctcccagtctccaacaatcctgtctgcatctccaggggagaaggtcacaatgact
tgcagggccagctcaagactaatttacatgcattggtatcagcagaagccaggatcctccccaaa
ccctggatttatgccacatccaacctggcttctggagtccctgctcgcttcagtggcagtgggtct
gggacctcttactctctcacaatcagcagagtggaggctgaagatgctgccacttattactgccag
cagtggaatagtaacccacccacgttcggtactgggaccaagctggagctgaaacgggctgatgct
gcaccaactgtatccatcttcccaccatccagtgagcagttaacatctggaggtgcctcagtcgtg
tgcttcttgaacaacttctaccccaaagacatcaatgtcaagtggaagattgatggcagtgaacga
caaaatggcgtcctgaacagttggactgatcaggacagcaaagacagcacctacagcatgagcagc
accctcacgttgaccaaggacgagtatgaacgacataacagctatacctgtgaggccactcacaag
acatcaacttcacccattgtcaagagcttcaacaggaatgagtgt

[Fig. 22-2]

Amino acid sequence of M30 antibody light chain (SEQ ID NO: 53)

MDFLVQIFSFLLISASVIMSRGQIVLSQSPTILSASPGEKVTMTCRASSRLIYMHWYQQKPGSSPK
PWIYATSNLASGVPARFSGSGSGTSYSLTISRVEAEDAATYYCQQWNSNPPTFGTGTKLELKRADA
APTVSIFPPSSEQLTSGGASVVCFLNNFYPKDINVKWKIDGSERQNGVLNSWTDQDSKDSTYSMSS
TLTLTKDEYERHNSYTCEATHKTSTSPIVKSFNRNEC

[Fig. 23]

DNA sequence encoding human κ chain secretory signal, human κ chain constant region, and human poly-A additional signal (SEQ ID NO: 56)

ggtaccacccaagctggctaggtaagcttgctagcgccaccatggtgctgcagacccaggtgttca
tctccctgctgctgtggatctccggcgcatatggcgatatcgtgatgattaaacgtacggtggccg
ccccctccgtgttcatcttcccccctccgacgagcagctgaagtccggcaccgcctccgtggtgt
gcctgctgaataacttctaccccagagaggccaaggtgcagtggaaggtggacaacgccctgcagt
ccgggaactcccaggagagcgtgaccgagcaggacagcaaggacagcacctacagcctgagcagca
ccctgaccctgagcaaagccgactacgagaagcacaaggtgtacgcctgcgaggtgacccaccagg
gcctgagctcccccgtcaccaagagcttcaacaggggggagtgttaggggcccgtttaaacgggtg
gcatccctgtgacccctccccagtgcctctcctggccctggaagttgccactccagtgcccaccag
ccttgtcctaataaaattaagttgcatcattttgtctgactaggtgtccttctataatattatggg
gtggaggggggtggtatggagcaaggggcaagttgggaagacaacctgtagggcctgcggggtcta
ttgggaaccaagctggagtgcagtggcacaatcttggctcactgcaatctccgcctcctgggttca
agcgattctcctgcctcagcctcccgagttgttgggattccaggcatgcatgaccaggctcaccta
atttttgtttttttggtagagacggggtttcaccatattggccaggctggtctccaactcctaatc
tcaggtgatctacccaccttggcctcccaaattgctgggattacaggcgtgaaccactgctccacg
cgccctgtagcggcgcattaagcgcggcgggtgtggtggttacgcgcagcgtgaccgctacacttg
ccagcgccctagcgcccgctcctttcgctttcttcccttcctttctcgccacgttcgccggctttc
cccgtcaagctctaaatcgggggctccctttagggttccgatttagtgctttacggcacctcgacc
ccaaaaaacttgattagggtgatggttcacgtagtgggccatcgccctgatagacggtttttcgcc
ctttgacgttggagtccacgttctttaatagtggactcttgttccaaactggaacaacactcaacc
ctatctcggtctattcttttgatttataagggattttgccgatttcggcctattggttaaaaaatg
agctgatttaacaaaaatttaacgcgaattaattctgtggaatgtgtgtcagttagggtgtggaaa
gtccccaggctccccagcaggcagaagtatgcaaagcatgcatctcaattagtcagcaaccaggtg
tggaaagtccccaggctccccagcaggcagaagtatgcaaagcatgcatctcaattagtcagcaac
catagtcccgcccctaactccgcccatcccgcccctaactccgcccagttccgcccattctccgcc
ccatggctgactaatttttttatttatgcagaggccgaggccgcctctgcctctgagctattcca
gaagtagtgaggaggctttttggaggcctaggcttttgcaaaaagctcccggg

[Fig. 24]

DNA fragment comprising DNA sequence encoding amino acids of signal sequence and constant region of human IgG1 (SEQ ID NO: 57)

tgctagcgccaccatgaaacacctgtggttcttcctcctgctggtggcagctcccagatgggtgct
gagccaggtgcaattgtgcaggcggttagctcagcctccaccaagggcccaagcgtcttccccctg
gcaccctcctccaagagcacctctggcggcacagccgccctgggctgcctggtcaaggactacttc
cccgaacccgtgaccgtgagctggaactcaggcgccctgaccagcggcgtgcacaccttccccgct
gtcctgcagtcctcaggactctactccctcagcagcgtggtgaccgtgccctccagcagcttgggc
acccagacctacatctgcaacgtgaatcacaagcccagcaacaccaaggtggacaagagagttgag
cccaaatcttgtgacaaaactcacacatgcccaccctgcccagcacctgaactcctgggggggaccc
tcagtcttcctcttcccccaaaacccaaggacaccctcatgatctcccggacccctgaggtcaca
tgcgtggtggtggacgtgagccacgaagaccctgaggtcaagttcaactggtacgtggacggcgtg
gaggtgcataatgccaagacaaagccccgggaggagcagtacaacagcacgtaccgggtggtcagc
gtcctcaccgtcctgcaccaggactggctgaatggcaaggagtacaagtgcaaggtctccaacaaa
gccctcccagcccccatcgagaaaaccatctccaaagccaaaggccagccccgggaaccacaggtg
tacaccctgcccccatcccgggaggagatgaccaagaaccaggtcagcctgacctgcctggtcaaa
ggcttctatcccagcgacatcgccgtggagtgggagagcaatggccagcccgagaacaactacaag
accacccctcccgtgctggactccgacggctccttcttcctctacagcaagctcaccgtggacaag
agcaggtggcagcagggcaacgtcttctcatgctccgtgatgcatgaggctctgcacaaccactac
acccagaagagcctctccctgtctcccggcaaatgagatatcgggcccgtttaaacgggtggca

[Fig. 25-1]

Nucleotide sequence of M30 antibody chimera-type light chain (SEQ ID NO: 58)

atggtgctgcagacccaggtgttcatctccctgctgctgtggatctccggcgcatatggccaaatt
gttctctcccagtctccaacaatcctgtctgcatctccaggggagaaggtcacaatgacttgcagg
gccagctcaagactaatttacatgcattggtatcagcagaagccaggatcctccccaaaccctgg
atttatgccacatccaacctggcttctggagtccctgctcgcttcagtggcagtgggtctgggacc
tcttactctctcacaatcagcagagtggaggctgaagatgctgccacttattactgccagcagtgg
aatagtaacccacccacgttcggtactgggaccaagctggagctgaaacgtacggtggccgccccc
tccgtgttcatcttcccccctccgacgagcagctgaagtccggcaccgcctccgtggtgtgcctg
ctgaataacttctaccccagagaggccaaggtgcagtggaaggtggacaacgccctgcagtccggg
aactcccaggagagcgtgaccgagcaggacagcaaggacagcacctacagcctgagcagcaccctg
accctgagcaaagccgactacgagaagcacaaggtgtacgcctgcgaggtgacccaccagggcctg
agctcccccgtcaccaagagcttcaacaggggggagtgt

[Fig. 25-2]

Amino acid sequence of M30 antibody chimera-type light chain (SEQ ID NO: 59)

MVLQTQVFISLLLWISGAYGQIVLSQSPTILSASPGEKVTMTCRASSRLIYMHWYQQKPGSSPKPW
IYATSNLASGVPARFSGSGSGTSYSLTISRVEAEDAATYYCQQWNSNPPTFGTGTKLELKRTVAAP
SVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTL
TLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

[Fig. 26-1]

Nucleotide sequence of M30 antibody chimera-type heavy chain (SEQ ID NO: 62)

atgaaacacctgtggttcttcctcctgctggtggcagctcccagatgggtgctgagcgaggtccag
ctgcagcagtctggacctgagctggtaaagcctggggcttcagtgaagatgtcctgcaaggcttct
ggatacacattcactaactatgttatgcactgggtgaagcagaagcctgggcagggccttgagtgg
attggatatattaatccttacaatgatgatgttaagtacaatgagaagttcaaaggcaaggccaca
cagacttcagacaaatcctccagcacagcctacatggaactcagcagcctgacctctgaggactct
gcggtctattactgtgcaagatgggggtactacggtagtcccttatactactttgactactggggc
caaggcaccactctcacagtcagctcagcctccaccaagggcccaagcgtcttcccccctggcaccc
tcctccaagagcacctctggcggcacagccgccctgggctgcctggtcaaggactacttccccgaa
cccgtgaccgtgagctggaactcaggcgccctgaccagcggcgtgcacaccttccccgctgtcctg
cagtcctcaggactctactccctcagcagcgtggtgaccgtgccctccagcagcttgggcacccag
acctacatctgcaacgtgaatcacaagcccagcaacaccaaggtggacaagagagttgagcccaaa
tcttgtgacaaaactcacacatgcccaccctgcccagcacctgaactcctgggggggaccctcagtc
ttcctcttcccccaaaacccaaggacaccctcatgatctcccggaccccctgaggtcacatgcgtg
gtggtggacgtgagccacgaagaccctgaggtcaagttcaactggtacgtggacggcgtggaggtg
cataatgccaagacaaagccccgggaggagcagtacaacagcacgtaccgggtggtcagcgtcctc
accgtcctgcaccaggactggctgaatggcaaggagtacaagtgcaaggtctccaacaaagccctc
ccagcccccatcgagaaaaccatctccaaagccaaaggccagccccgggaaccacaggtgtacacc
ctgcccccatcccgggaggagatgaccaagaaccaggtcagcctgacctgcctggtcaaaggcttc
tatcccagcgacatcgccgtggagtgggagagcaatggccagcccgagaacaactacaagaccacc
cctcccgtgctggactccgacggctccttcttcctctacagcaagctcaccgtggacaagagcagg
tggcagcagggcaacgtcttctcatgctccgtgatgcatgaggctctgcacaaccactacacccag
aagagcctctccctgtctcccggcaaa

[Fig. 26-2]

Amino acid sequence of M30 antibody chimera-type heavy chain (SEQ ID NO: 63)

MKHLWFFLLLVAAPRWVLSEVQLQQSGPELVKPGASVKMSCKASGYTFTNYVMHWVKQKPGQGLEW
IGYINPYNDDVKYNEKFKGKATQTSDKSSSTAYMELSSLTSEDSAVYYCARWGYYGSPLYYFDYWG
QGTTLTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL
QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSV
FLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVL
TVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF

YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQ
KSLSLSPGK

[Fig. 27-1]

Nucleotide sequence of M30-L1-type light chain (SEQ ID NO: 70)

atggtgctgcagacccaggtgttcatctccctgctgctgtggatctccggcgcatatggcgagatc
gtgctgacccagagccccgccaccctgtctctgagccctggcgagagagccaccctgagctgcaga
gccagcagccgcctgatctacatgcactggtatcagcagaagcccggccaggcccccagactgctg
atctacgccaccagcaacctggccagcggcatccccgccagattttctggcagcggcagcggcacc
gacttcaccctgaccatctctcggctggaacccgaggacttcgccgtgtactactgccagcagtgg
aacagcaacccccccacctttcggccagggcaccaaggtcgaaatcaagcgtacggtggccgccccc
tccgtgttcatcttcccccccctccgacgagcagctgaagtccggcaccgcctccgtggtgtgcctg
ctgaataacttctaccccagagaggccaaggtgcagtggaaggtggacaacgccctgcagtccggg
aactcccaggagagcgtgaccgagcaggacagcaaggacagcacctacagcctgagcagcaccctg
accctgagcaaagccgactacgagaagcacaaggtgtacgcctgcgaggtgacccaccagggcctg
agctcccccgtcaccaagagcttcaacaggggggagtgt

[Fig. 27-2]

Amino acid sequence of M30-L1-type light chain (SEQ ID NO: 71)

MVLQTQVFISLLLWISGAYGEIVLTQSPATLSLSPGERATLSCRASSRLIYMHWYQQKPGQAPRLL
IYATSNLASGIPARFSGSGSGTDFTLTISRLEPEDFAVYYCQQWNSNPPTFGQGTKVEIKRTVAAP
SVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTL
TLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

[Fig. 28-1]

Nucleotide sequence of M30-L2-type light chain (SEQ ID NO: 72)

atggtgctgcagacccaggtgttcatctccctgctgctgtggatctccggcgcatatggcgagatc
gtgctgacccagagccccgccaccctgtctctgagccctggcgagagagccaccctgagctgcaga
gccagcagcaggctgatctacatgcactggtatcagcagaagcccggccaggcccccagactgtgg
atctacgccaccagcaacctggccagcggcatccccgccagattttctggcagcggcagcggcacc
gactacaccctgaccatcagccgcctggaacccgaggacttcgccgtgtactactgccagcagtgg
aacagcaacccccccacctttcggccagggcaccaaggtcgaaatcaagcgtacggtggccgccccc
tccgtgttcatcttcccccctccgacgagcagctgaagtccggcaccgcctccgtggtgtgcctg
ctgaataacttctaccccagagaggccaaggtgcagtggaaggtggacaacgccctgcagtccggg
aactcccaggagagcgtgaccgagcaggacagcaaggacagcacctacagcctgagcagcaccctg
accctgagcaaagccgactacgagaagcacaaggtgtacgcctgcgaggtgacccaccagggcctg
agctcccccgtcaccaagagcttcaacaggggggagtgt

[Fig. 28-2]

Amino acid sequence of M30-L2-type light chain (SEQ ID NO: 73)

MVLQTQVFISLLLWISGAYGEIVLTQSPATLSLSPGERATLSCRASSRLIYMHWYQQKPGQAPRLW
IYATSNLASGIPARFSGSGSGTDYTLTISRLEPEDFAVYYCQQWNSNPPTFGQGTKVEIKRTVAAP
SVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTL
TLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

[Fig. 29-1]

Nucleotide sequence of M30-L3-type light chain (SEQ ID NO: 74)

atggtgctgcagacccaggtgttcatctccctgctgctgtggatctccggcgcatatggccagatc
gtgctgtcccagagccccgccaccctgtctctgagccctggcgagagagccaccctgacctgcaga
gccagcagcaggctgatctacatgcactggtatcagcagaagcccggcagcgcccccaagctgtgg
atctacgccaccagcaacctggccagcggcatccccgccagattttctggcagcggcagcggcacc
agctacaccctgaccatctcccgcctggaacccgaggacttcgccgtgtactactgccagcagtgg
aacagcaacccccccacctttcggccagggcaccaaggtcgaaatcaagcgtacggtggccgccccc
tccgtgttcatcttcccccccctccgacgagcagctgaagtccggcaccgcctccgtggtgtgcctg
ctgaataacttctaccccagagaggccaaggtgcagtggaaggtggacaacgccctgcagtccggg
aactcccaggagagcgtgaccgagcaggacagcaaggacagcacctacagcctgagcagcaccctg
accctgagcaaagccgactacgagaagcacaaggtgtacgcctgcgaggtgacccaccagggcctg
agctcccccgtcaccaagagcttcaacaggggggagtgt

[Fig. 29-2]

Amino acid sequence of M30-L3-type light chain (SEQ ID NO: 75)

MVLQTQVFISLLLWISGAYGQIVLSQSPATLSLSPGERATLTCRASSRLIYMHWYQQKPGSAPKLW
IYATSNLASGIPARFSGSGSGTSYTLTISRLEPEDFAVYYCQQWNSNPPTFGQGTKVEIKRTVAAP
SVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTL
TLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

[Fig. 30-1]

Nucleotide sequence of M30-L4-type light chain (SEQ ID NO: 76)

atggtgctgcagacccaggtgttcatctccctgctgctgtggatctccggcgcatatggcgagatc
gtgctgacccagagccccgccaccctgtctctgagccctggcgagagagccaccctgagctgcaga
gccagcagccgcctgatctacatgcactggtatcagcagaagcccggccaggcccccagacctctg
atctacgccaccagcaacctggccagcggcatccccgccagattttctggcagcggcagcggcacc
gacttcaccctgaccatcagcagcctggaacccgaggacttcgccgtgtactactgccagcagtgg
aacagcaacccccccacccttcggccagggcaccaaggtcgaaatcaagcgtacggtggccgccccc
tccgtgttcatcttcccccccctccgacgagcagctgaagtccggcaccgcctccgtggtgtgcctg
ctgaataacttctaccccagagaggccaaggtgcagtggaaggtggacaacgccctgcagtccggg
aactcccaggagagcgtgaccgagcaggacagcaaggacagcacctacagcctgagcagcaccctg
accctgagcaaagccgactacgagaagcacaaggtgtacgcctgcgaggtgacccaccagggcctg
agctcccccgtcaccaagagcttcaacaggggggagtgt

[Fig. 30-2]

Amino acid sequence of M30-L4-type light chain (SEQ ID NO: 77)

MVLQTQVFISLLLWISGAYGEIVLTQSPATLSLSPGERATLSCRASSRLIYMHWYQQKPGQAPRPL
IYATSNLASGIPARFSGSGSGTDFTLTISSLEPEDFAVYYCQQWNSNPPTFGQGTKVEIKRTVAAP
SVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTL
TLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

[Fig. 31-1]

Nucleotide sequence of M30-L5-type light chain (SEQ ID NO: 78)

atggtgctgcagacccaggtgttcatctccctgctgctgtggatctccggcgcatatggccagatc
gtgctgtcccagagccccgccaccctgtctctgagccctggcgagagagccaccctgacctgcaga
gccagcagcaggctgatctacatgcactggtatcagcagaagcccggcagcgccccccaagccttgg
atctacgccaccagcaacctggccagcggcatccccgccagattttctggcagcggcagcggcacc
agctacaccctgaccatctcccgcctggaacccgaggacttcgccgtgtactactgccagcagtgg
aacagcaacccccccaccttcggccagggcaccaaggtcgaaatcaagcgtacggtggccgccccc
tccgtgttcatcttcccccctccgacgagcagctgaagtccggcaccgcctccgtggtgtgcctg
ctgaataacttctaccccagagaggccaaggtgcagtggaaggtggacaacgccctgcagtccggg
aactcccaggagagcgtgaccgagcaggacagcaaggacagcacctacagcctgagcagcaccctg
accctgagcaaagccgactacgagaagcacaaggtgtacgcctgcgaggtgacccaccagggcctg
agctcccccgtcaccaagagcttcaacaggggggagtgt

[Fig. 31-2]

Amino acid sequence of M30-L5-type light chain (SEQ ID NO: 79)

MVLQTQVFISLLLWISGAYGQIVLSQSPATLSLSPGERATLTCRASSRLIYMHWYQQKPGSAPKPW
IYATSNLASGIPARFSGSGSGTSYTLTISRLEPEDFAVYYCQQWNSNPPTFGQGTKVEIKRTVAAP
SVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTL
TLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

[Fig. 32-1]

Nucleotide sequence of M30-L6-type light chain (SEQ ID NO: 80)

atggtgctgcagacccaggtgttcatctccctgctgctgtggatctccggcgcatatggcgagatc
gtgctgacccagagccccgccaccctgtctctgagccctggcgagagagccaccctgagctgcaga
gccagcagccgcctgatctacatgcactggtatcagcagaagcccggccaggcccccagacctctg
atctacgccaccagcaacctggccagcggcatccccgccagattttctggcagcggcagcggcacc
gacttcaccctgaccatcagccgcctggaacccgaggacttcgccgtgtactactgccagcagtgg
aacagcaacccccccacctttcggccagggcaccaaggtcgaaatcaagcgtacggtggccgccccc
tccgtgttcatcttcccccctccgacgagcagctgaagtccggcaccgcctccgtggtgtgcctg
ctgaataacttctaccccagagaggccaaggtgcagtggaaggtggacaacgccctgcagtccggg
aactcccaggagagcgtgaccgagcaggacagcaaggacagcacctacagcctgagcagcaccctg
accctgagcaaagccgactacgagaagcacaaggtgtacgcctgcgaggtgacccaccagggcctg
agctcccccgtcaccaagagcttcaacaggggggagtgt

[Fig. 32-2]

Amino acid sequence of M30-L6-type light chain (SEQ ID NO: 81)

MVLQTQVFISLLLWISGAYGEIVLTQSPATLSLSPGERATLSCRASSRLIYMHWYQQKPGQAPRPL
IYATSNLASGIPARFSGSGSGTDFTLTISRLEPEDFAVYYCQQWNSNPPTFGQGTKVEIKRTVAAP
SVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTL
TLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

[Fig. 33-1]

Nucleotide sequence of M30-L7-type light chain (SEQ ID NO: 82)

atggtgctgcagacccaggtgttcatctccctgctgctgtggatctccggcgcatatggcgagatc
gtgctgacccagagccccgccaccctgtctctgagccctggcgagagagccaccctgagctgcaga
gccagcagccgcctgatctacatgcactggtatcagcagaagcccggccaggcccccagacctctg
atctacgccaccagcaacctggccagcggcatccccgccagattttctggcagcggcagcggcacc
gactacaccctgaccatcagccgcctggaacccgaggacttcgccgtgtactactgccagcagtgg
aacagcaacccccccacctttcggccagggcaccaaggtcgaaatcaagcgtacggtggccgccccc
tccgtgttcatcttcccccccctccgacgagcagctgaagtccggcaccgcctccgtggtgtgcctg
ctgaataacttctaccccagagaggccaaggtgcagtggaaggtggacaacgccctgcagtccggg
aactcccaggagagcgtgaccgagcaggacagcaaggacagcacctacagcctgagcagcaccctg
accctgagcaaagccgactacgagaagcacaaggtgtacgcctgcgaggtgacccaccagggcctg
agctcccccgtcaccaagagcttcaacaggggggagtgt

[Fig. 33-2]

Amino acid sequence of M30-L7-type light chain (SEQ ID NO: 83)

MVLQTQVFISLLLWISGAYGEIVLTQSPATLSLSPGERATLSCRASSRLIYMHWYQQKPGQAPRPL
IYATSNLASGIPARFSGSGSGTDYTLTISRLEPEDFAVYYCQQWNSNPPTFGQGTKVEIKRTVAAP
SVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTL
TLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

[Fig. 34-1]

Nucleotide sequence of M30-H1-type heavy chain (SEQ ID NO: 84)

atgaaacacctgtggttcttcctcctgctggtggcagctcccagatgggtgctgagccaggtgcag
ctggtgcagtctggcgccgaagtgaagaaacccggcagcagcgtgaaggtgtcctgcaaggccagc
ggctacaccttcaccaactacgtgatgcactgggtgcgccaggcccctgggcagggactggaatgg
atgggctacatcaaccctacaacgacgacgtgaagtacaacgagaagttcaagggcagagtgacc
atcaccgccgacgagagcaccagcaccgcctacatggaactgagcagcctgcggagcgaggacacc
gccgtgtactactgcgccagatggggctactacggcagccccctgtactacttcgactactggggc
cagggcaccctggtgacagtcagctcagcctccaccaagggcccaagcgtcttcccccctggcaccc
tcctccaagagcacctctggcggcacagccgccctgggctgcctggtcaaggactacttccccgaa
cccgtgaccgtgagctggaactcaggcgccctgaccagcggcgtgcacaccttccccgctgtcctg
cagtcctcaggactctactccctcagcagcgtggtgaccgtgccctccagcagcttgggcacccag
acctacatctgcaacgtgaatcacaagcccagcaacaccaaggtggacaagagagttgagcccaaa
tcttgtgacaaaactcacacatgcccaccctgcccagcacctgaactcctgggggggaccctcagtc
ttcctcttcccccaaaacccaaggacaccctcatgatctcccggacccctgaggtcacatgcgtg
gtggtggacgtgagccacgaagaccctgaggtcaagttcaactggtacgtggacggcgtggaggtg
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accgtcctgcaccaggactggctgaatggcaaggagtacaagtgcaaggtctccaacaaagccctc
ccagcccccatcgagaaaaccatctccaaagccaaaggccagccccgggaaccacaggtgtacacc
ctgcccccatcccgggaggagatgaccaagaaccaggtcagcctgacctgcctggtcaaaggcttc
tatcccagcgacatcgccgtggagtgggagagcaatggccagcccgagaacaactacaagaccacc
cctcccgtgctggactccgacggctccttcttcctctacagcaagctcaccgtggacaagagcagg
tggcagcagggcaacgtcttctcatgctccgtgatgcatgaggctctgcacaaccactacacccag
aagagcctctccctgtctcccggcaaa

[Fig. 34-2]

Amino acid sequence of M30-H1-type heavy chain (SEQ ID NO: 85)

MKHLWFFLLLVAAPRWVLSQVQLVQSGAEVKKPGSSVKVSCKASGYTFTNYVMHWVRQAPGQGLEW
MGYINPYNDDVKYNEKFKGRVTITADESTSTAYMELSSLRSEDTAVYYCARWGYYGSPLYYFDYWG
QGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL
QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSV
FLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVL
TVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF
YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQ
KSLSLSPGK

[Fig. 35-1]

Nucleotide sequence of M30-H2-type heavy chain (SEQ ID NO: 86)

atgaaacacctgtggttcttcctcctgctggtggcagctcccagatgggtgctgagccaggtgcag
ctggtgcagtctggcgccgaagtgaagaaacccggcagcagcgtgaaggtgtcctgcaaggccagc
ggctacaccttcaccaactacgtgatgcactgggtgcgccaggcccctgggcagggactggaatgg
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atcaccgccgacgagagcaccagcaccgcctacatggaactgagcagcctgcggagcgaggacacc
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tcctccaagagcacctctggcggcacagccgccctgggctgcctggtcaaggactacttccccgaa
cccgtgaccgtgagctggaactcaggcgccctgaccagcggcgtgcacaccttccccgctgtcctg
cagtcctcaggactctactccctcagcagcgtggtgaccgtgccctccagcagcttgggcacccag
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gtggtggacgtgagccacgaagaccctgaggtcaagttcaactggtacgtggacggcgtggaggtg
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ctgcccccatcccgggaggagatgaccaagaaccaggtcagcctgacctgcctggtcaaaggcttc
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cctcccgtgctggactccgacggctccttcttcctctacagcaagctcaccgtggacaagagcagg
tggcagcagggcaacgtcttctcatgctccgtgatgcatgaggctctgcacaaccactacacccag
aagagcctctccctgtctcccggcaaa

[Fig. 35-2]

Amino acid sequence of M30-H2-type heavy chain (SEQ ID NO: 87)

MKHLWFFLLLVAAPRWVLSQVQLVQSGAEVKKPGSSVKVSCKASGYTFTNYVMHWVRQAPGQGLEW
IGYINPYNDDVKYNEKFKGRVTITADESTSTAYMELSSLRSEDTAVYYCARWGYYGSPLYYFDYWG
QGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL
QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSV
FLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVL
TVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF
YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQ
KSLSLSPGK

[Fig. 36-1]

Nucleotide sequence of M30-H3-type heavy chain (SEQ ID NO: 88)

atgaaacacctgtggttcttcctcctgctggtggcagctcccagatgggtgctgagcgaggtgcag
ctggtgcagtctggcgccgaagtgaagaaacccggcagcagcgtgaaggtgtcctgcaaggccagc
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atcggctacatcaaccctacaacgacgacgtgaagtacaacgagaagttcaagggcaaggccacc
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cctcccgtgctggactccgacggctccttcttcctctacagcaagctcaccgtggacaagagcagg
tggcagcagggcaacgtcttctcatgctccgtgatgcatgaggctctgcacaaccactacacccag
aagagcctctccctgtctcccggcaaa

[Fig. 36-2]

Amino acid sequence of M30-H3-type heavy chain (SEQ ID NO: 89)

MKHLWFFLLLVAAPRWVLSEVQLVQSGAEVKKPGSSVKVSCKASGYTFTNYVMHWVKQAPGQGLEW
IGYINPYNDDVKYNEKFKGKATITADESTSTAYMELSSLRSEDTAVYYCARWGYYGSPLYYFDYWG
QGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL
QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSV
FLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVL
TVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF
YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQ
KSLSLSPGK

[Fig. 37-1]

Nucleotide sequence of M30-H4-type heavy chain (SEQ ID NO: 90)

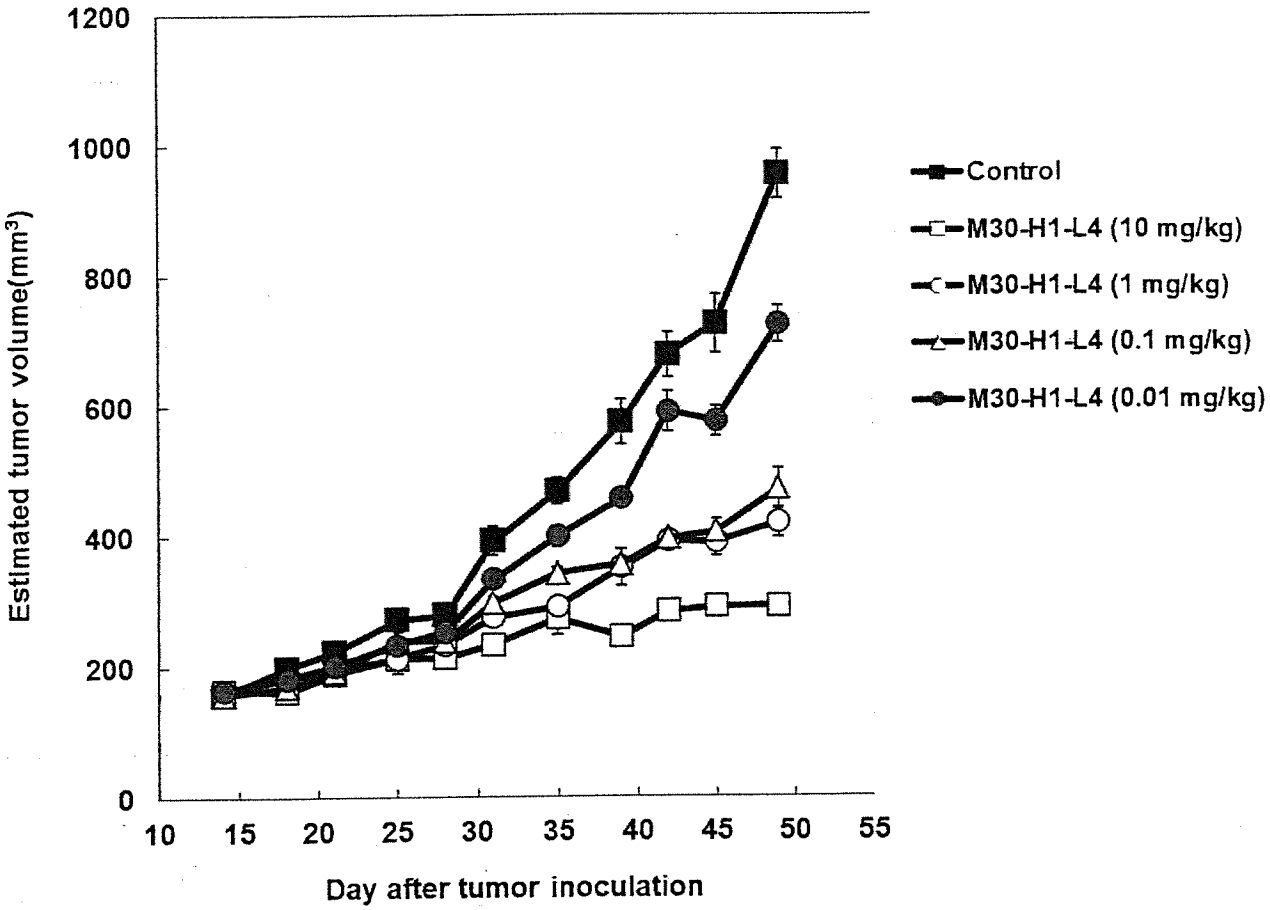
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ggctacaccttcaccaactacgtgatgcactgggtcaagcaggcccctgggcagggcctggaatgg
atcggctacatcaacccctacaacgacgacgtgaagtacaacgagaagttcaagggcaaggccacc
cagaccagcgacaagagcaccagcaccgcctacatggaactgagcagcctgcggagcgaggacacc
gccgtgtactactgcgccagatggggctactacggcagccccctgtactacttcgactactggggc
cagggcaccctggtcaccgtcagctcagcctccaccaagggcccaagcgtcttcccccctggcaccc
tcctccaagagcacctctggcggcacagccgccctgggctgcctggtcaaggactacttccccgaa
cccgtgaccgtgagctggaactcaggcgccctgaccagcggcgtgcacaccttccccgctgtcctg
cagtcctcaggactctactccctcagcagcgtggtgaccgtgccctccagcagcttgggcacccag
acctacatctgcaacgtgaatcacaagcccagcaacaccaaggtggacaagagagttgagcccaaa
tcttgtgacaaaactcacacatgcccaccctgcccagcacctgaactcctgggggggaccctcagtc
ttcctcttcccccccaaaacccaaggacaccctcatgatctcccggacccctgaggtcacatgcgtg
gtggtggacgtgagccacgaagaccctgaggtcaagttcaactggtacgtggacggcgtggaggtg
cataatgccaagacaaagccccgggaggagcagtacaacagcacgtaccgggtggtcagcgtcctc
accgtcctgcaccaggactggctgaatggcaaggagtacaagtgcaaggtctccaacaaagccctc
ccagcccccatcgagaaaaccatctccaaagccaaaggccagccccgggaaccacaggtgtacacc
ctgcccccatcccgggaggagatgaccaagaaccaggtcagcctgacctgcctggtcaaaggcttc
tatcccagcgacatcgccgtggagtgggagagcaatggccagcccgagaacaactacaagaccacc
cctcccgtgctggactccgacggctccttcttcctctacagcaagctcaccgtggacaagagcagg
tggcagcagggcaacgtcttctcatgctccgtgatgcatgaggctctgcacaaccactacacccag
aagagcctctccctgtctcccggcaaa

[Fig. 37-2]

Amino acid sequence of M30-H4-type heavy chain (SEQ ID NO: 91)

MKHLWFFLLLVAAPRWVLSEVQLVQSGAEVKKPGSSVKVSCKASGYTFTNYVMHWVKQAPGQGLEW
IGYINPYNDDVKYNEKFKGKATQTSDKSTSTAYMELSSLRSEDTAVYYCARWGYYGSPLYYFDYWG
QGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL
QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSV
FLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVL
TVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF
YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQ
KSLSLSPGK

[Fig. 38]


1200
1000
800
600
400
200
0
Estimated tumor volume(mm3)
10
15
20
25
30
35
40
45
50
55
Day after tumor inoculation
Control
M30-H1-L4 (10 mg/kg)
M30-H1-L4 (1 mg/kg)
M30-H1-L4 (0.1 mg/kg)
M30-H1-L4 (0.01 mg/kg)