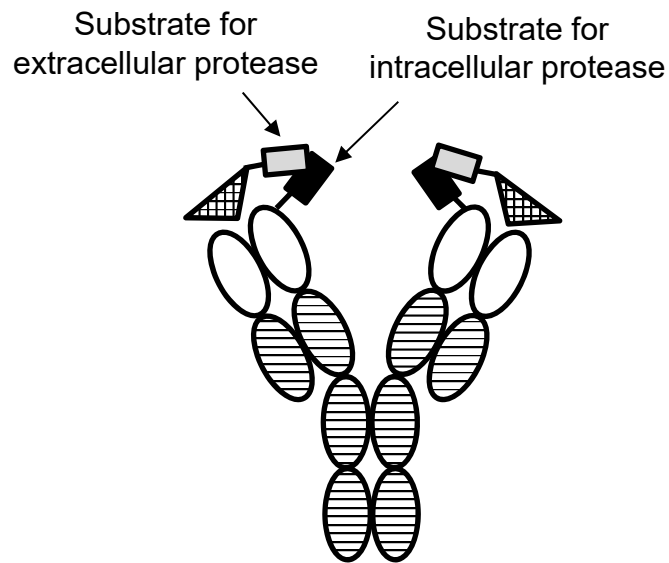


Fig. 1

A



B

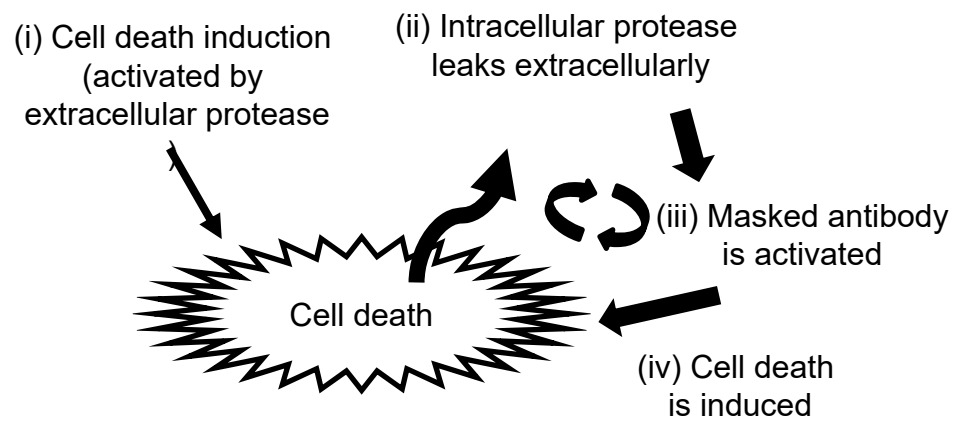


Fig. 2

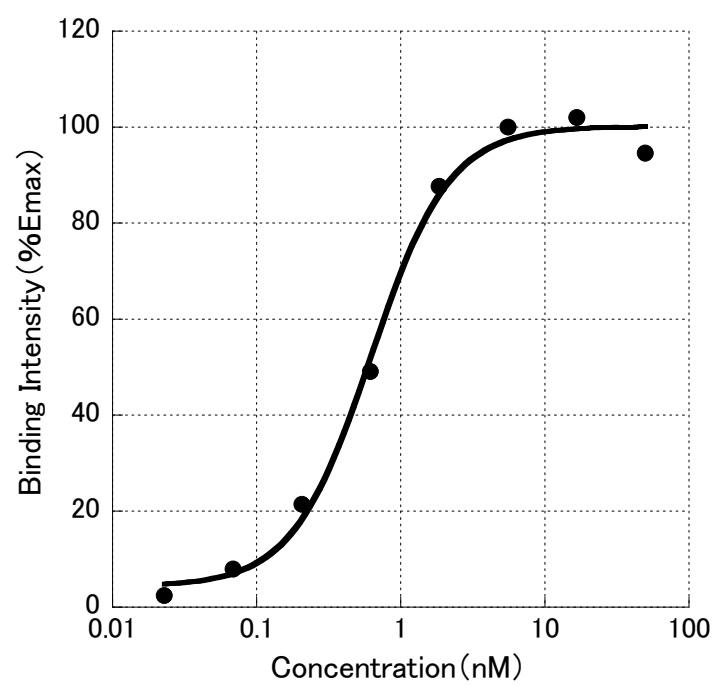


Fig. 3

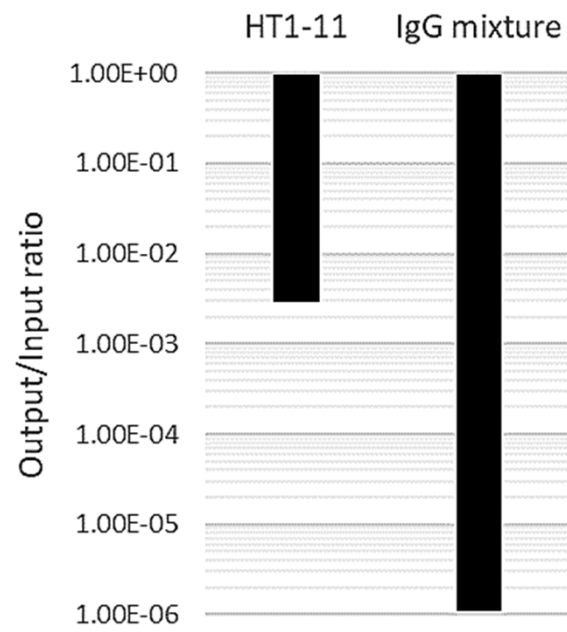


Fig. 4-1

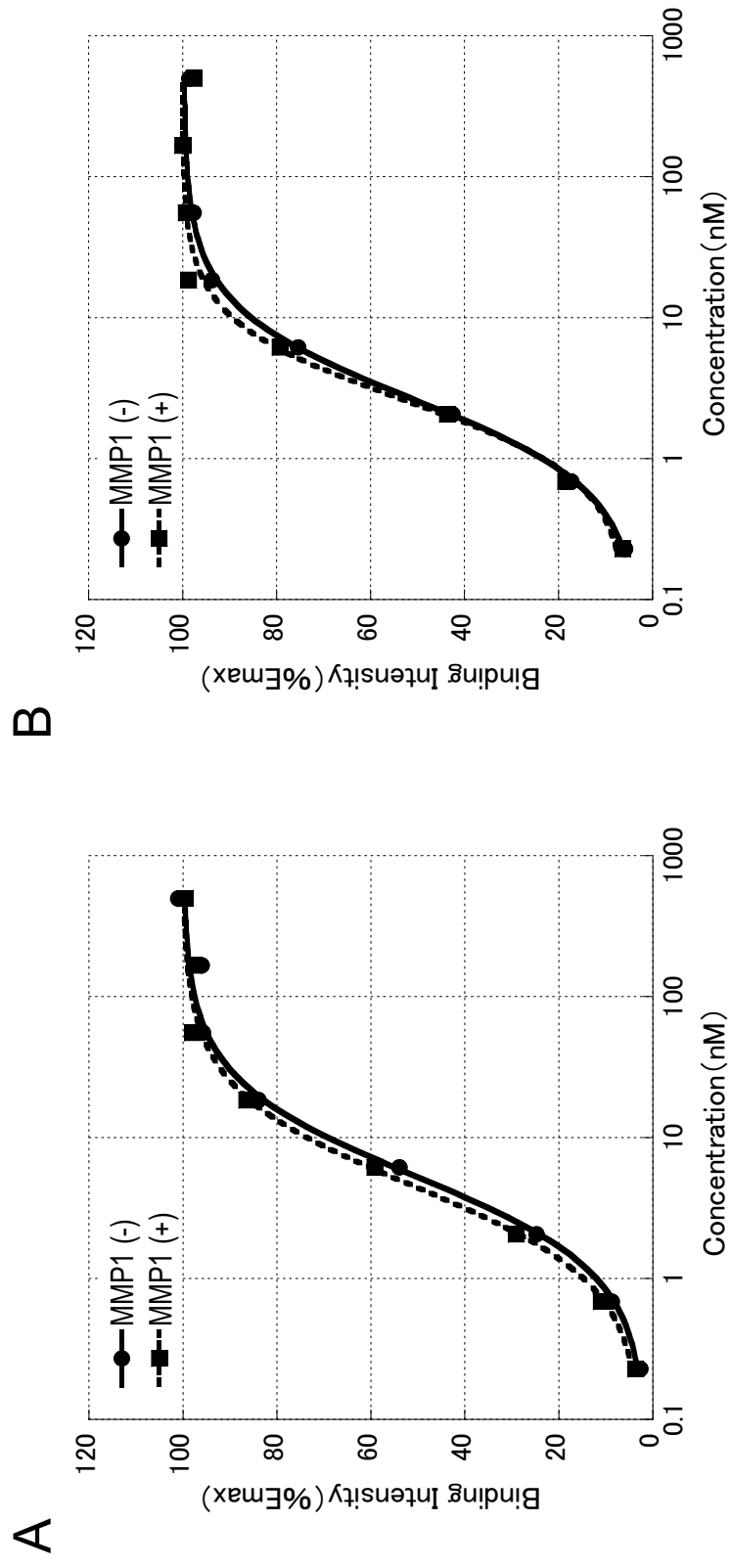


Fig. 4-2

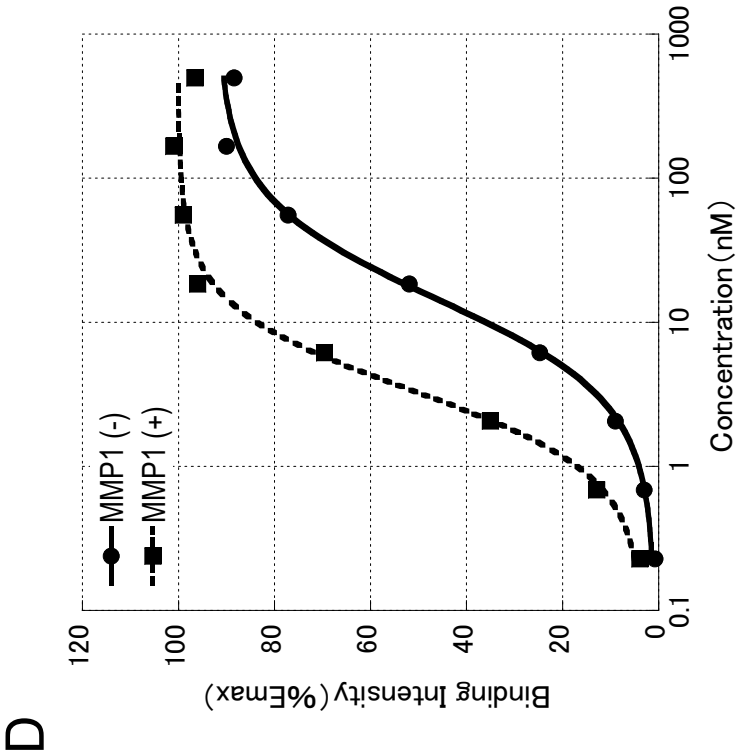
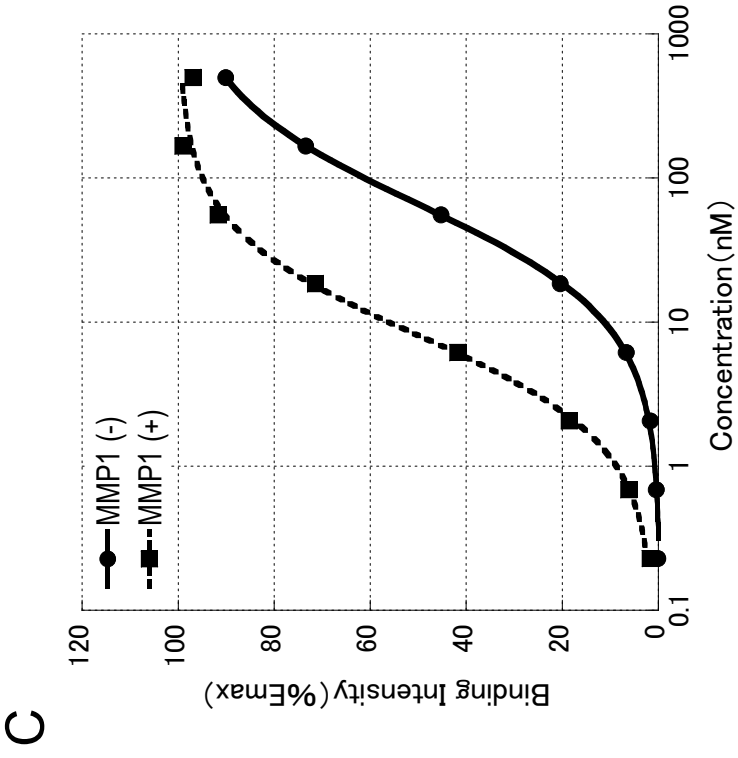


Fig. 5-1

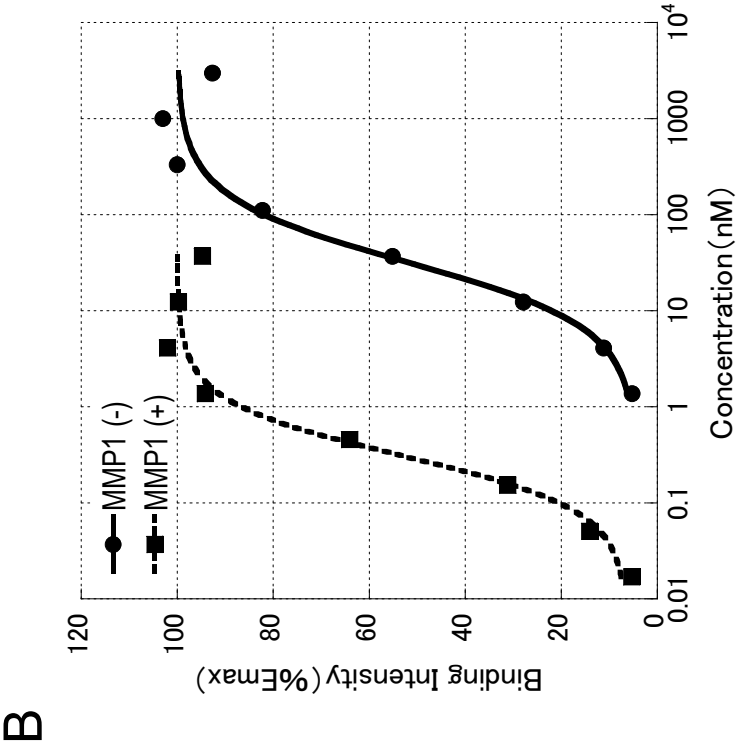
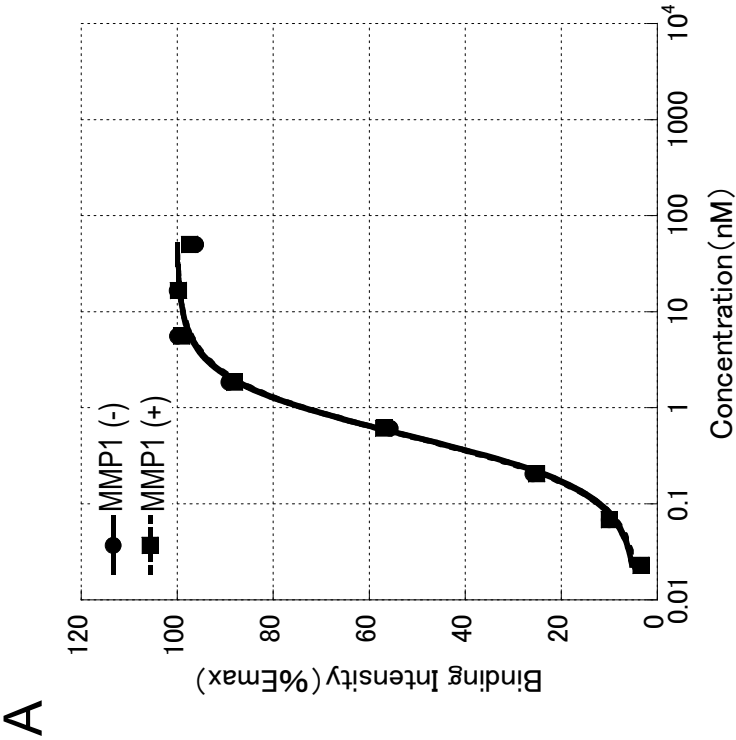
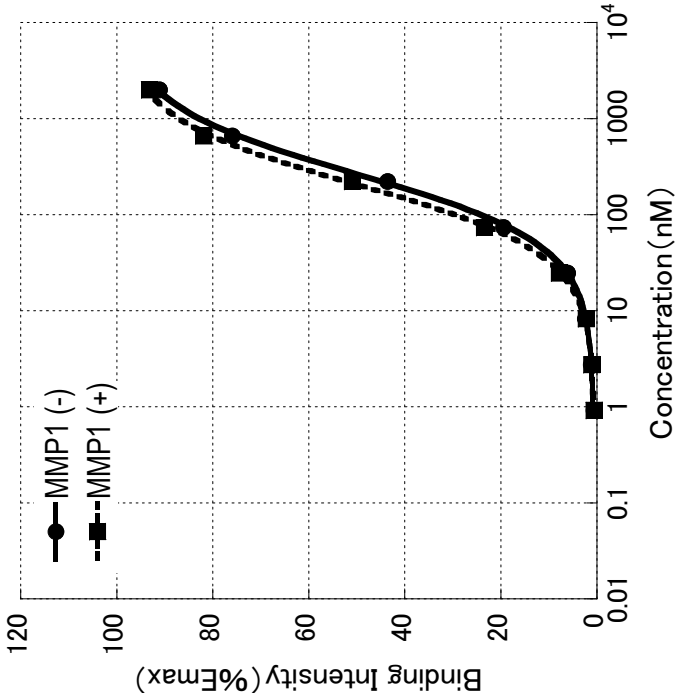


Fig. 5-2

C



D

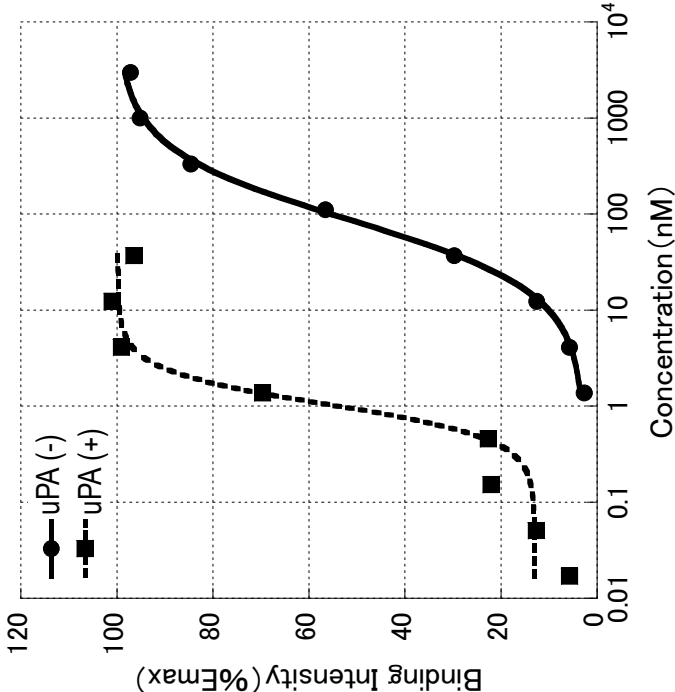
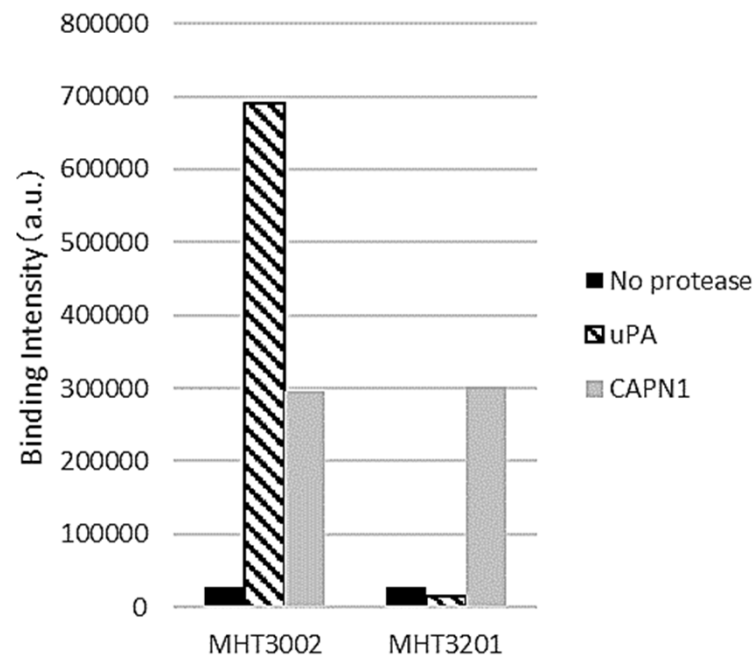


Fig. 6

A



B

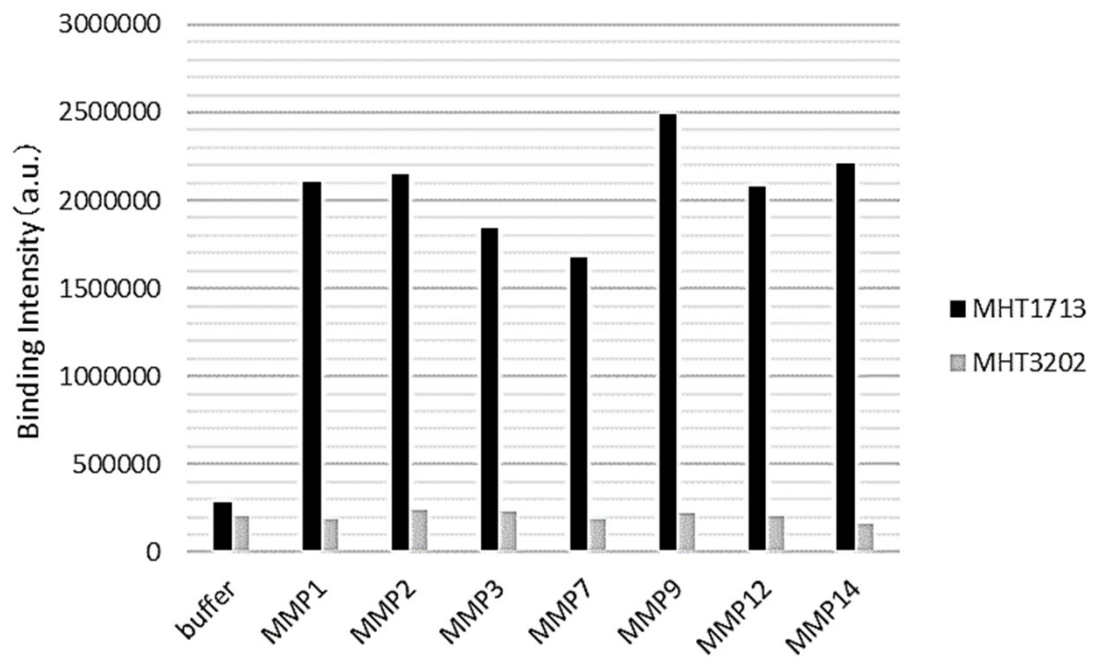


Fig. 7-1

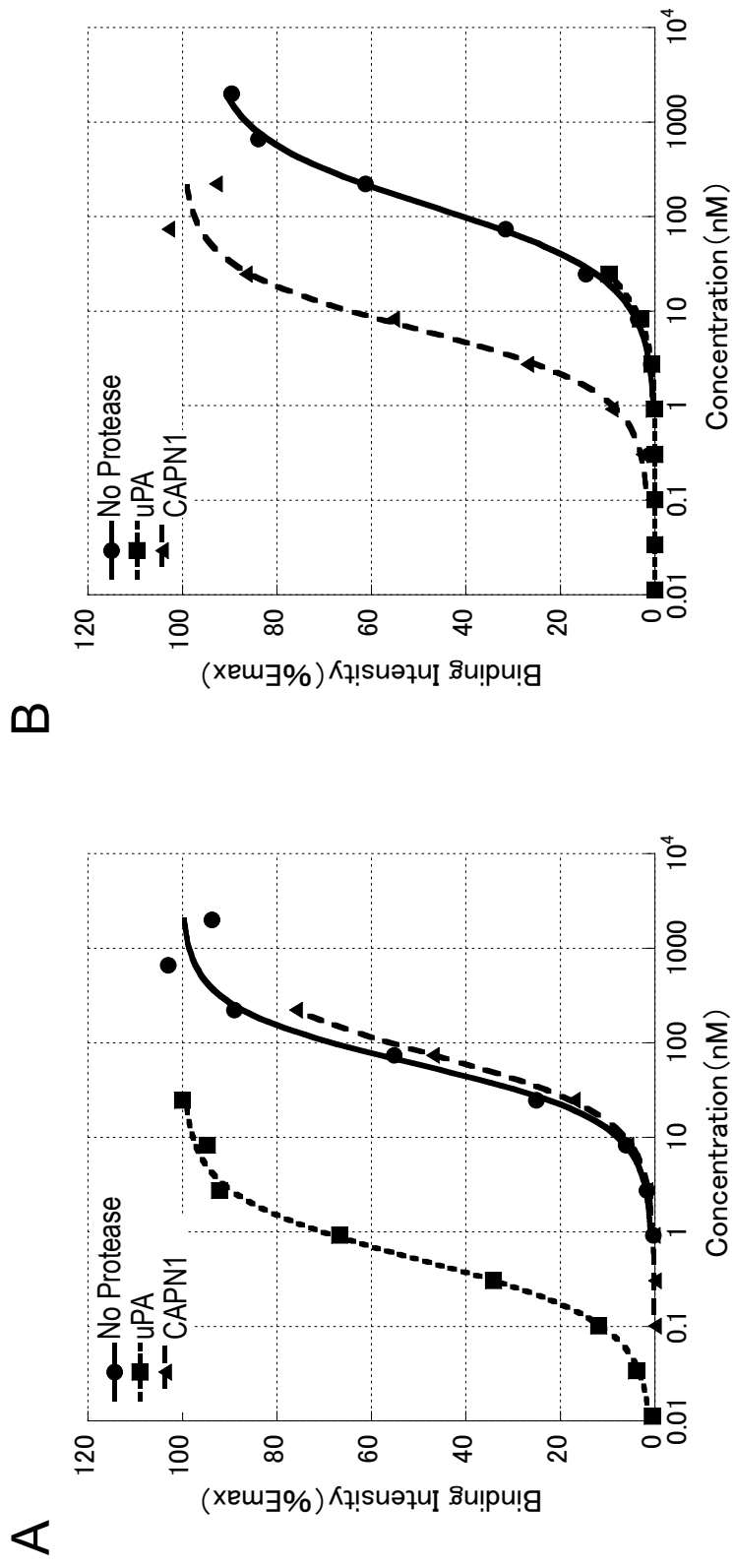
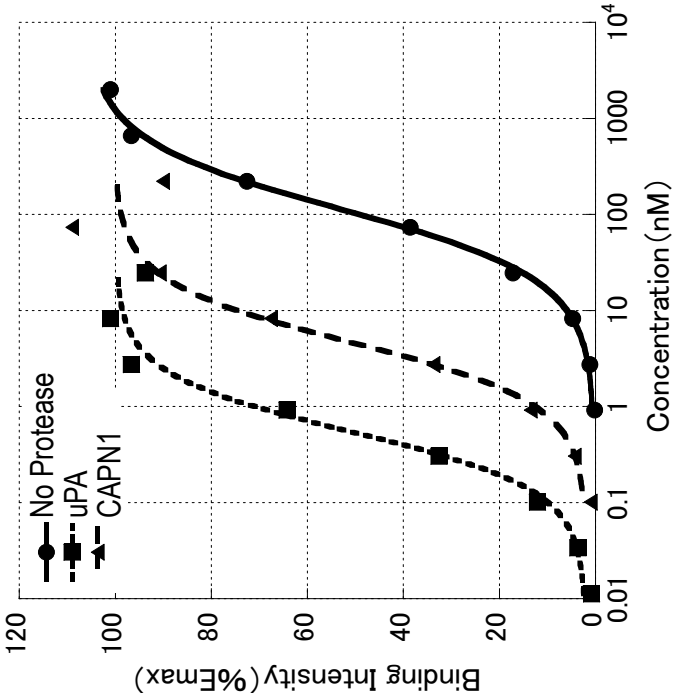


Fig. 7-2

C



D

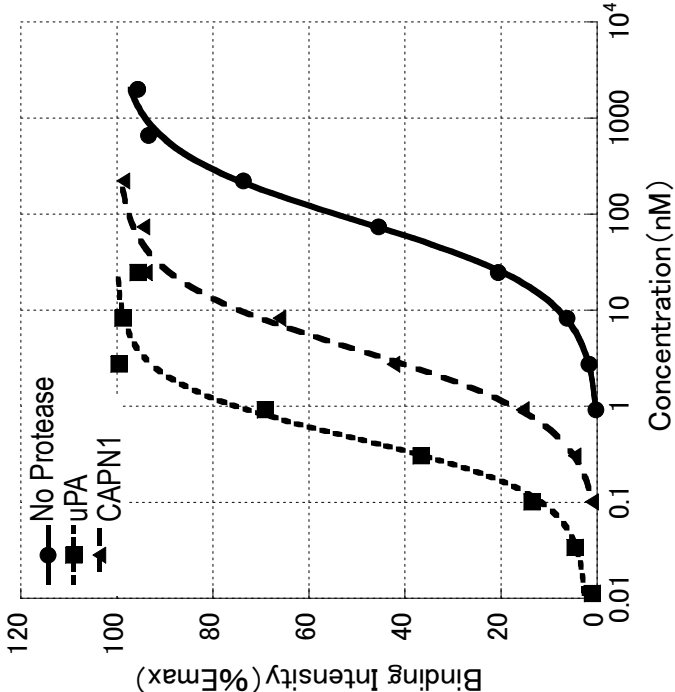
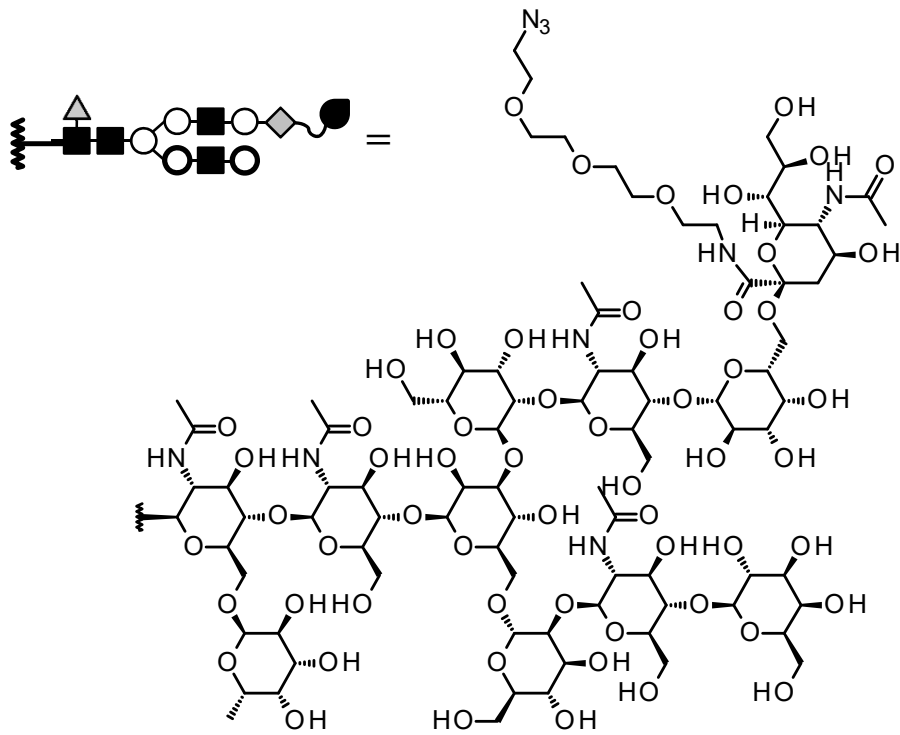


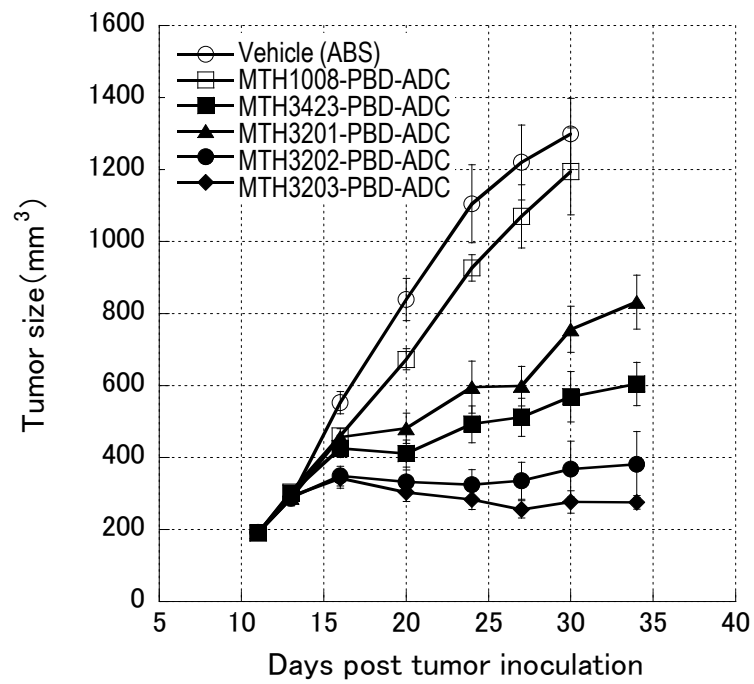
Fig. 8



Structural formula of
N297 glycan

Fig. 9

A



B

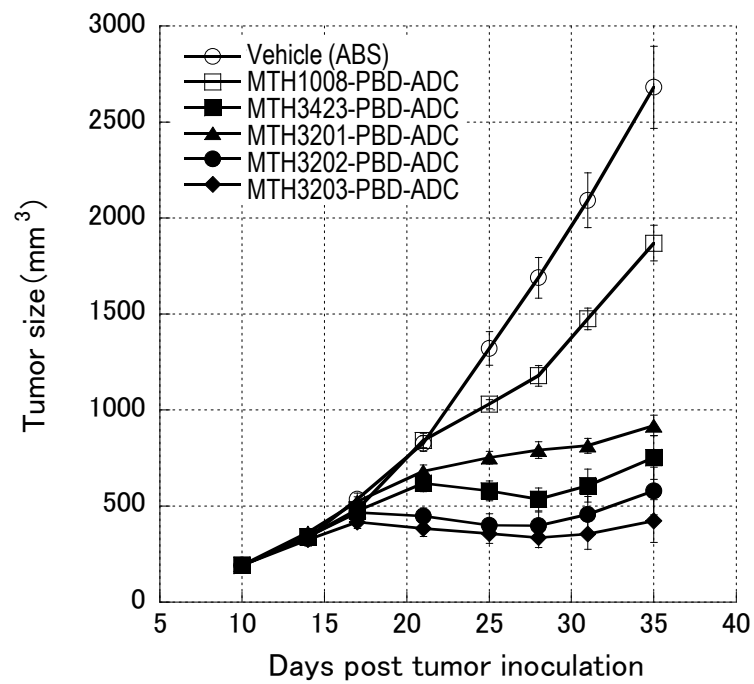


Fig. 10

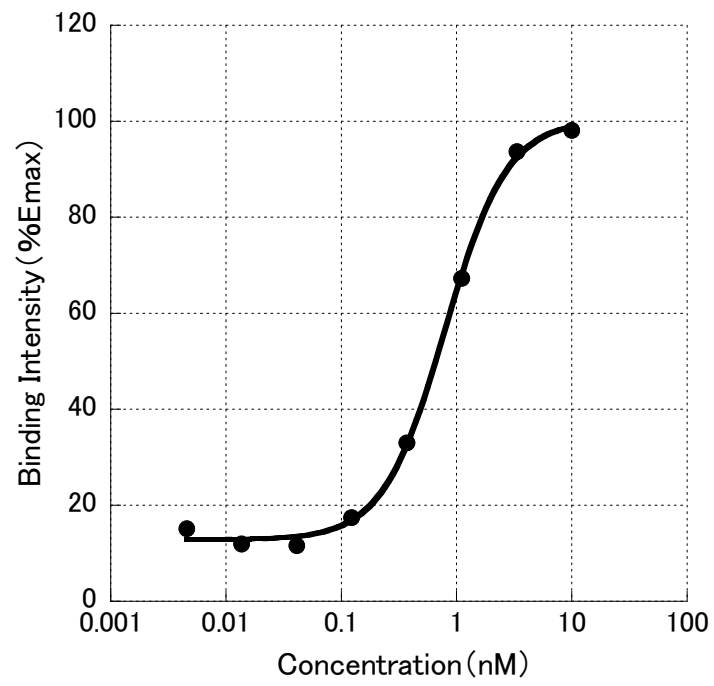


Fig. 11

A

Linear 15 mer lib	ZPZP lib
N-XXXXXXXXXXXXXXXXX-C	N-XXXXXZPZPXXXXGS-C

X: 20 amino acids based on NNS codon

Z: 6 amino acids (H, Y, W, R, Q, C) based on YRK codon

B

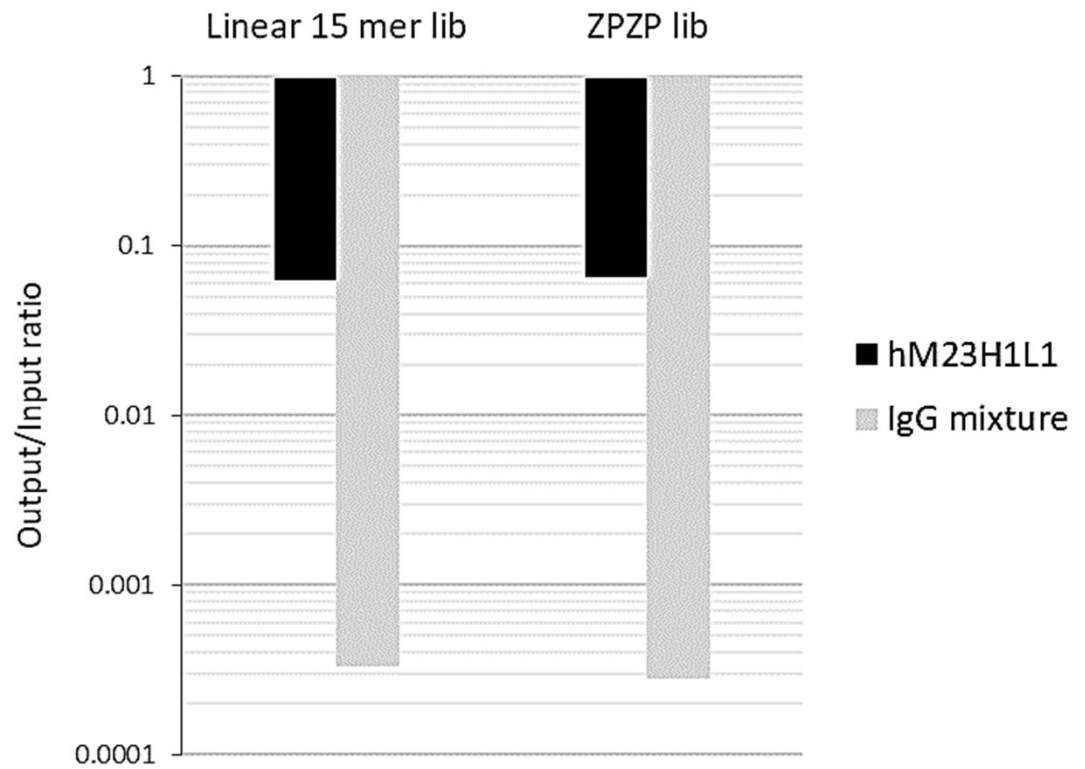


Fig. 12-1

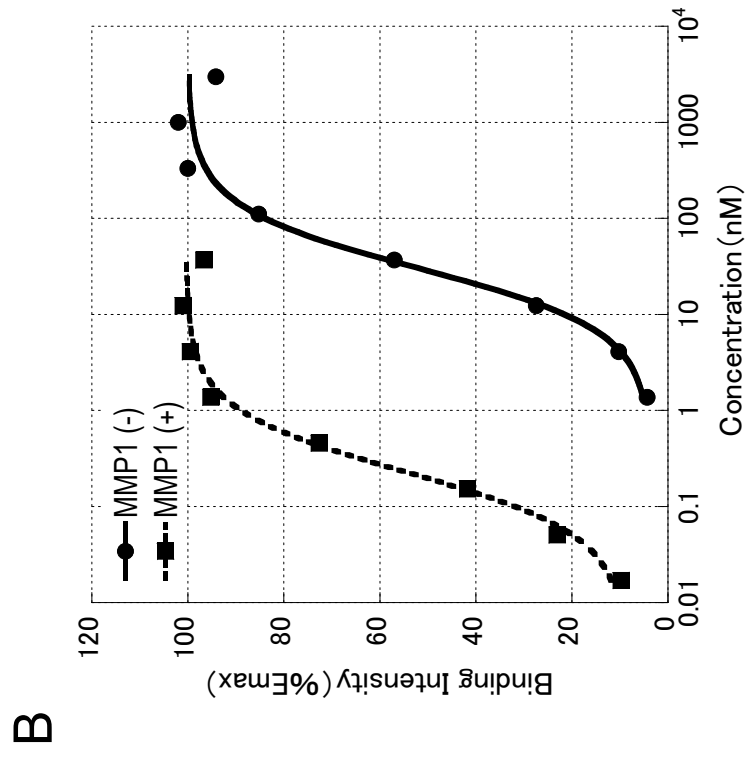
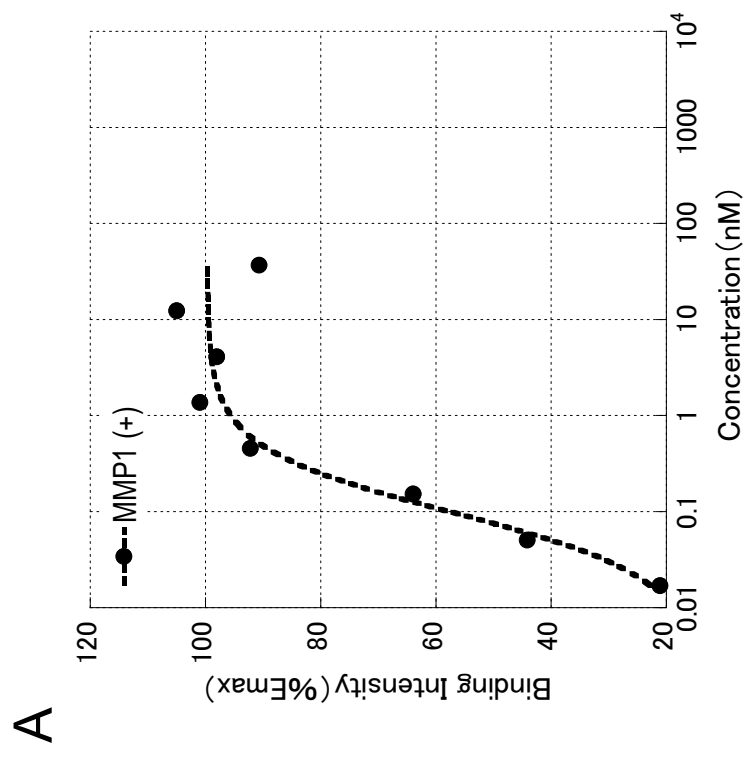


Fig. 12-2

C

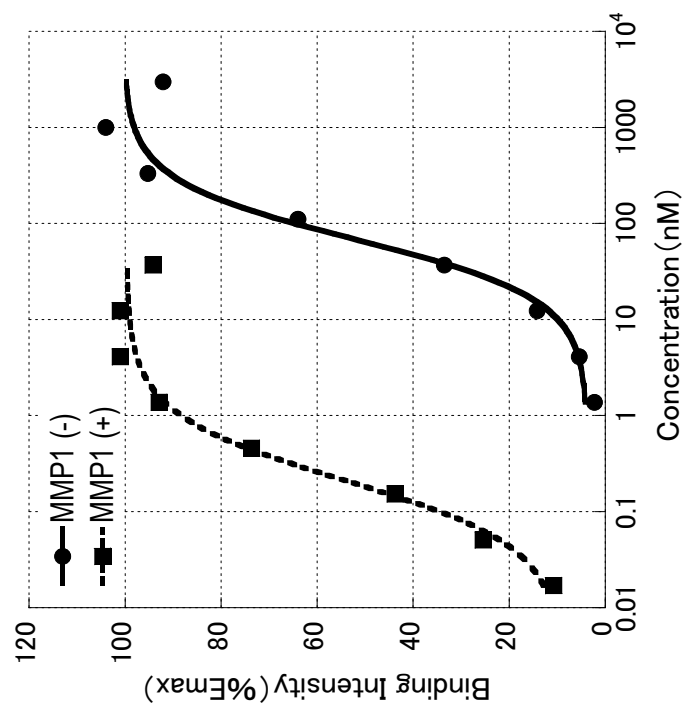
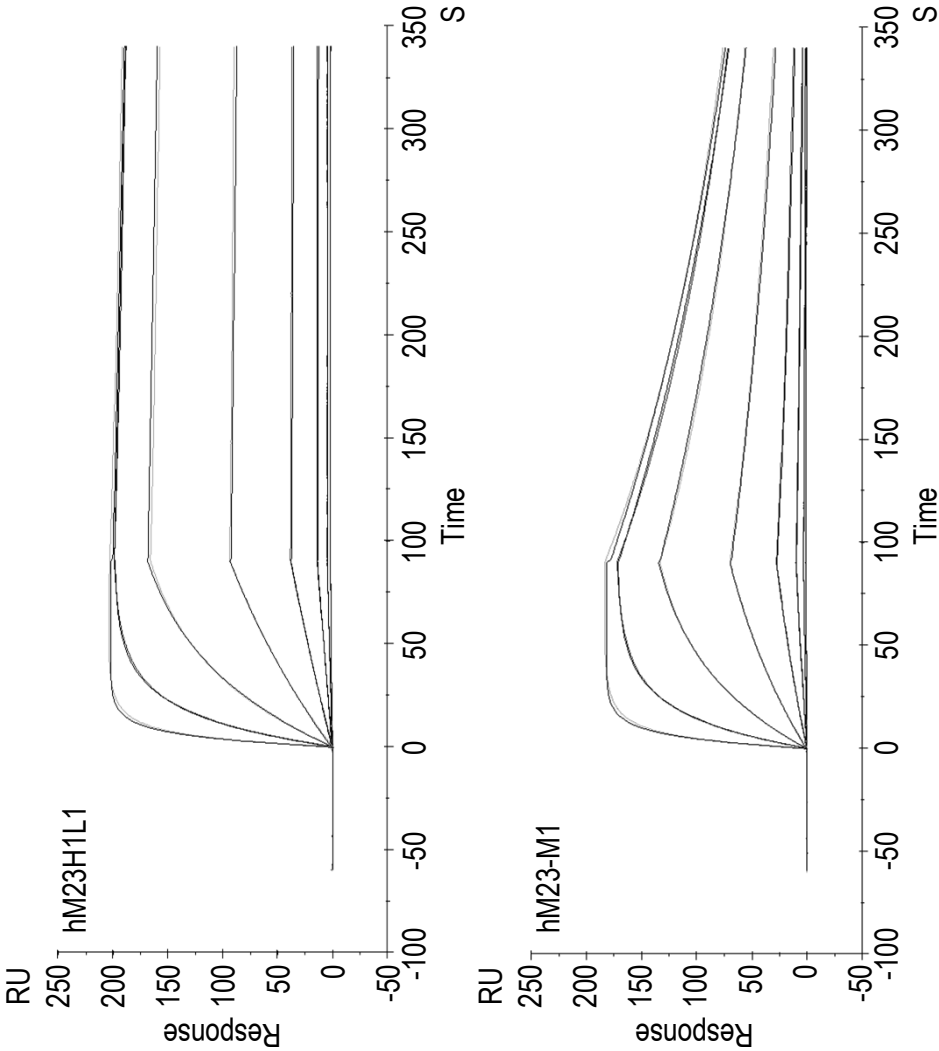


Fig. 13

A



B

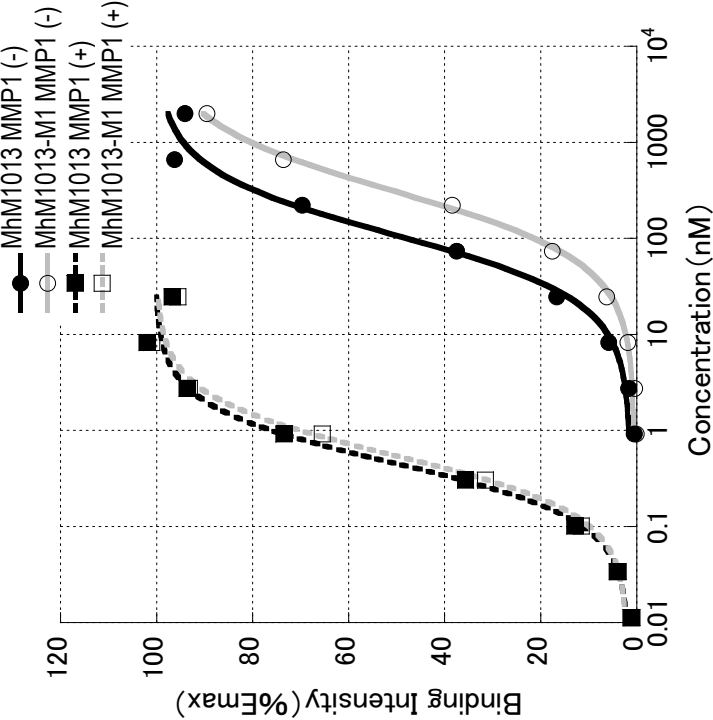


Fig. 14-1

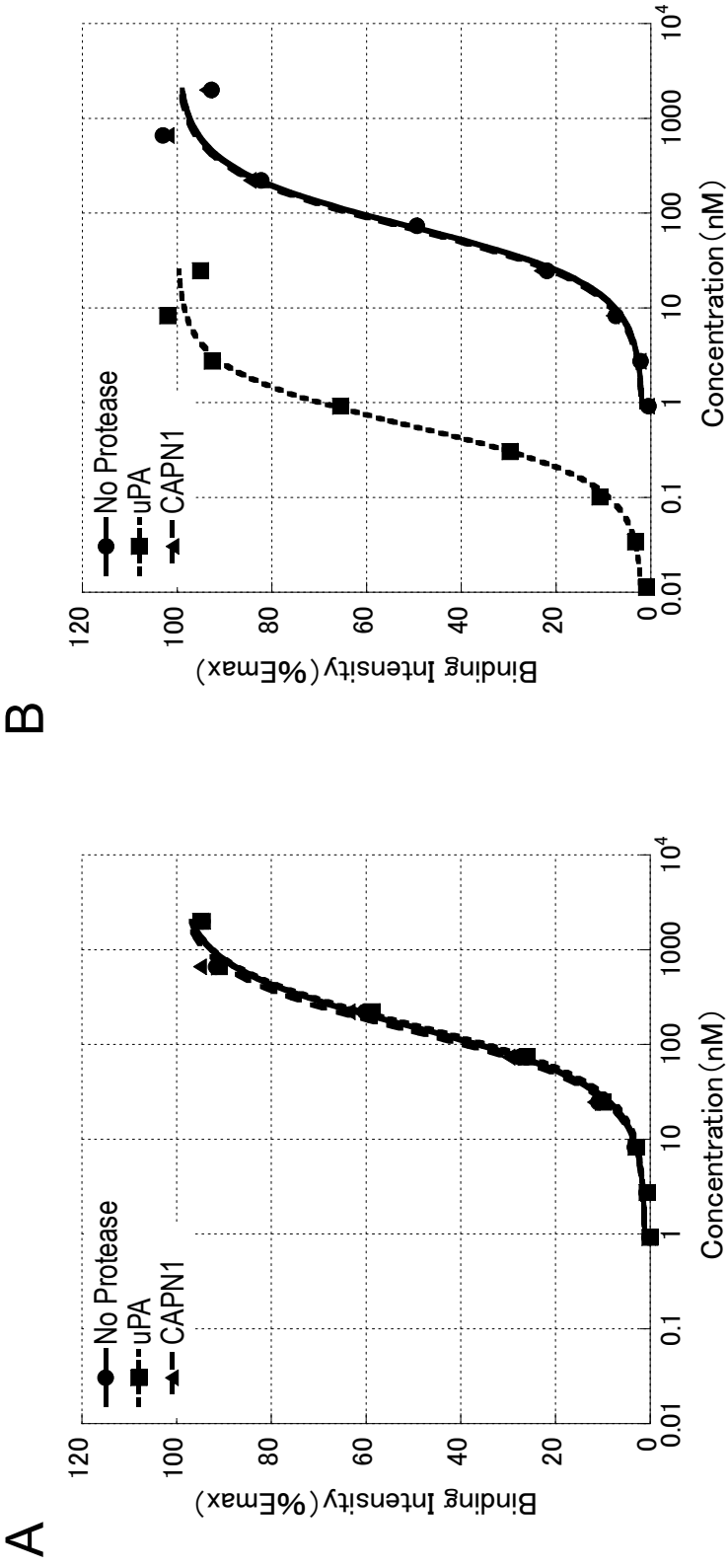
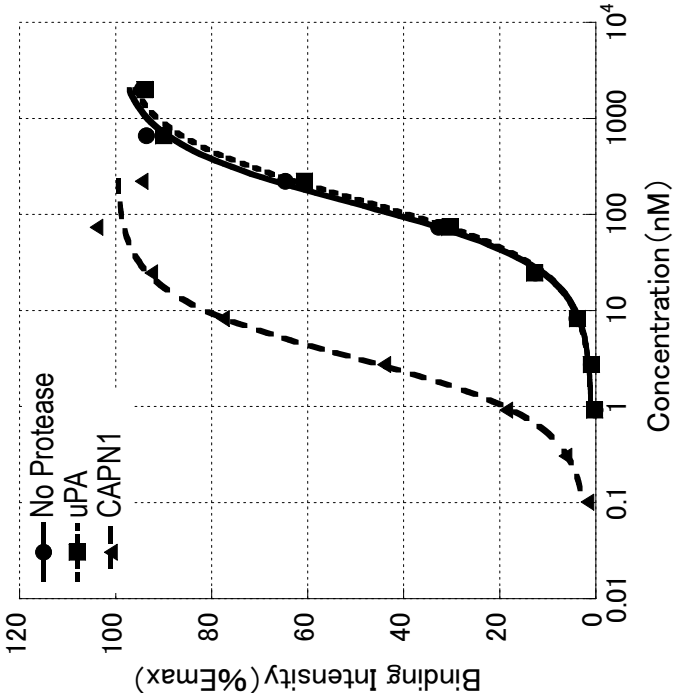


Fig. 14-2

C



D

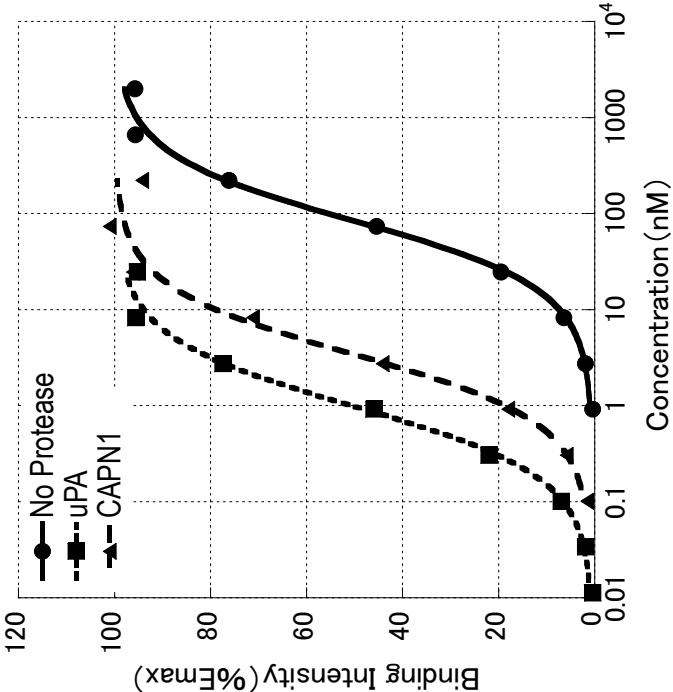
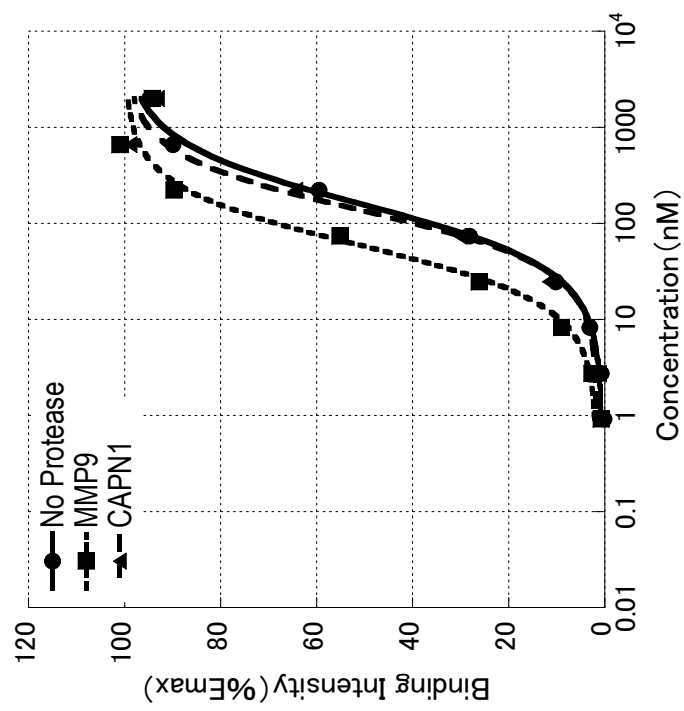


Fig. 14-3

E



F

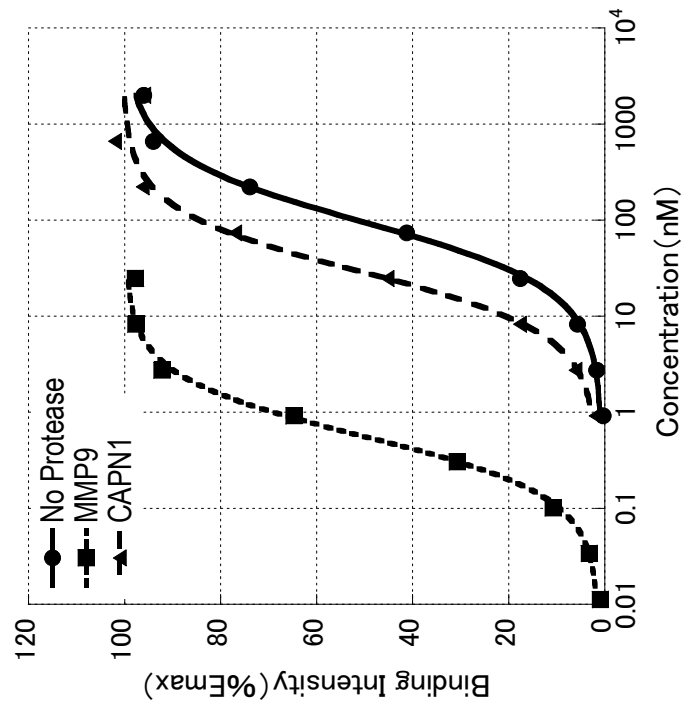


Fig. 14-4

G

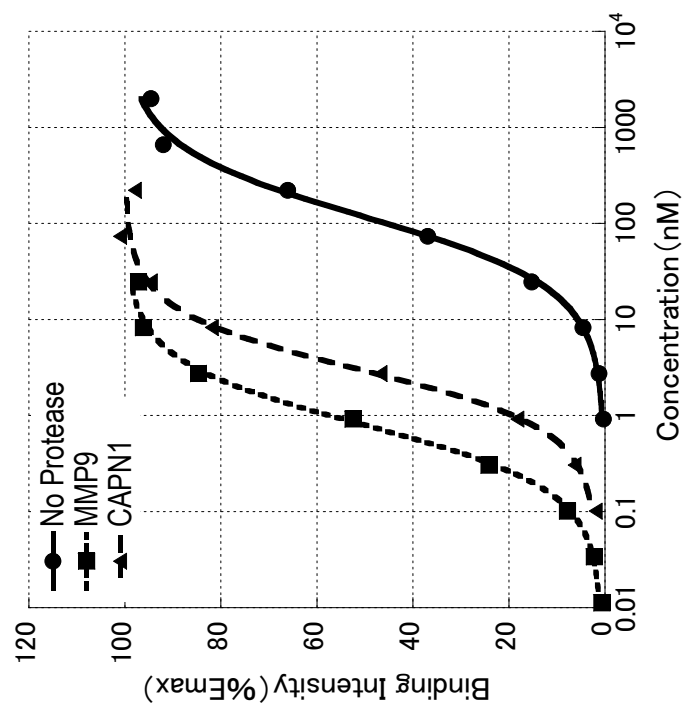


Fig. 15

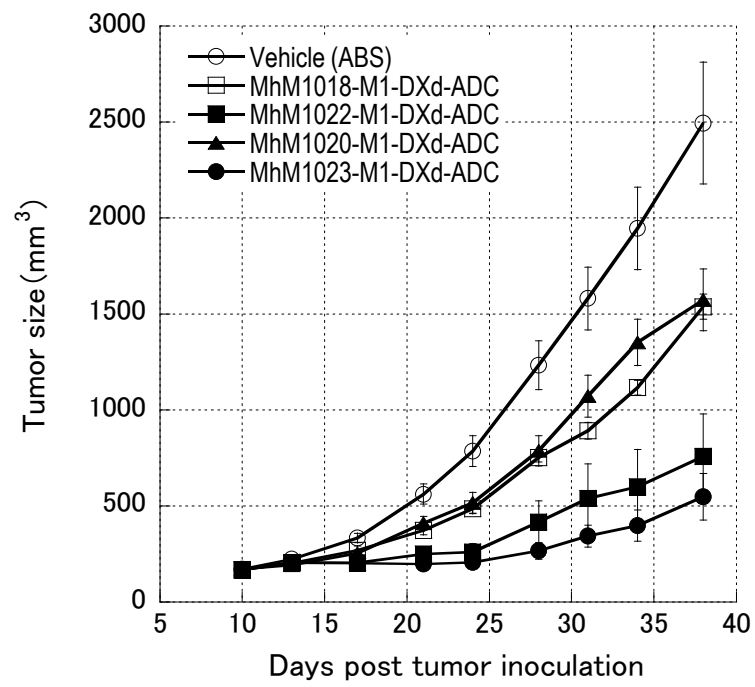


Fig. 16

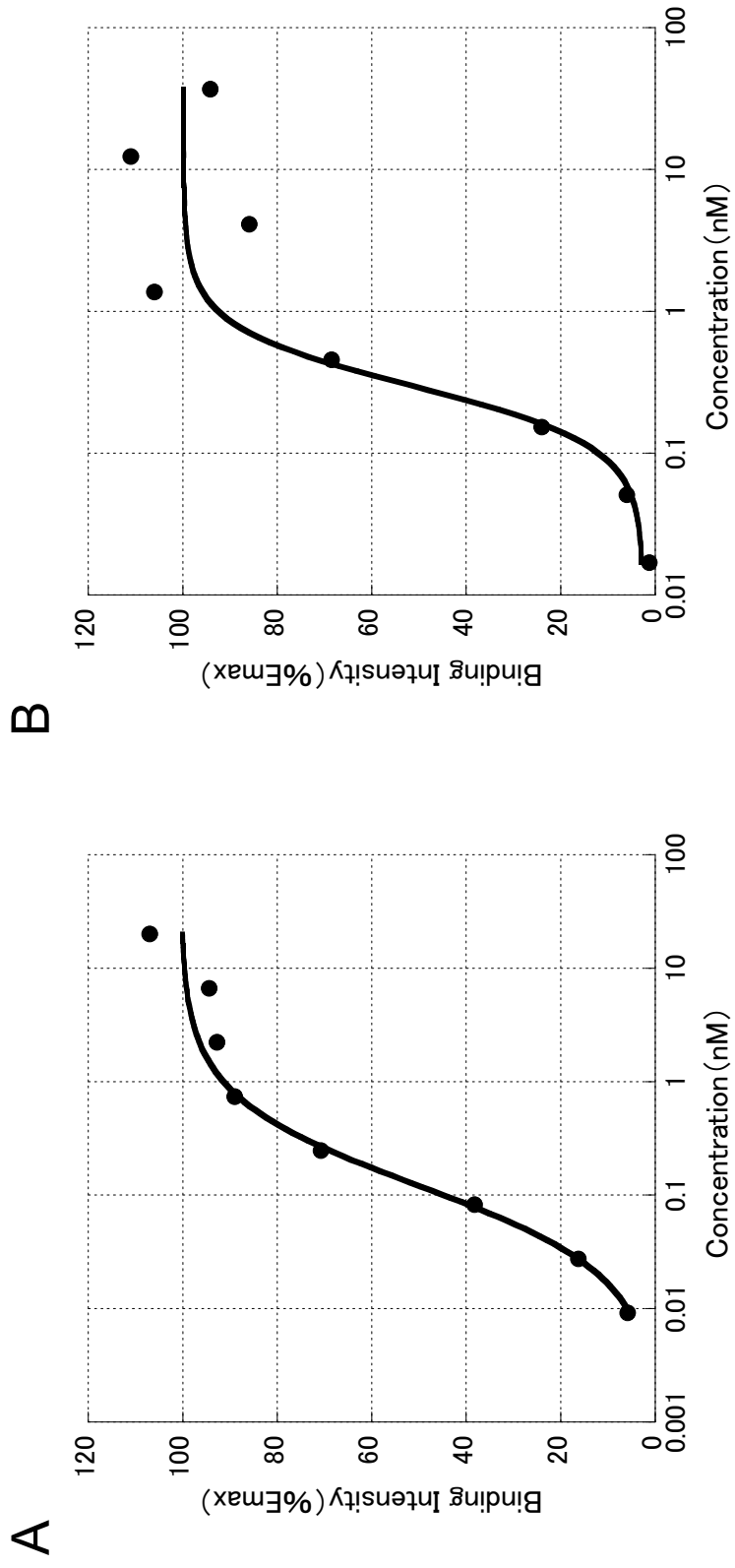


Fig. 17

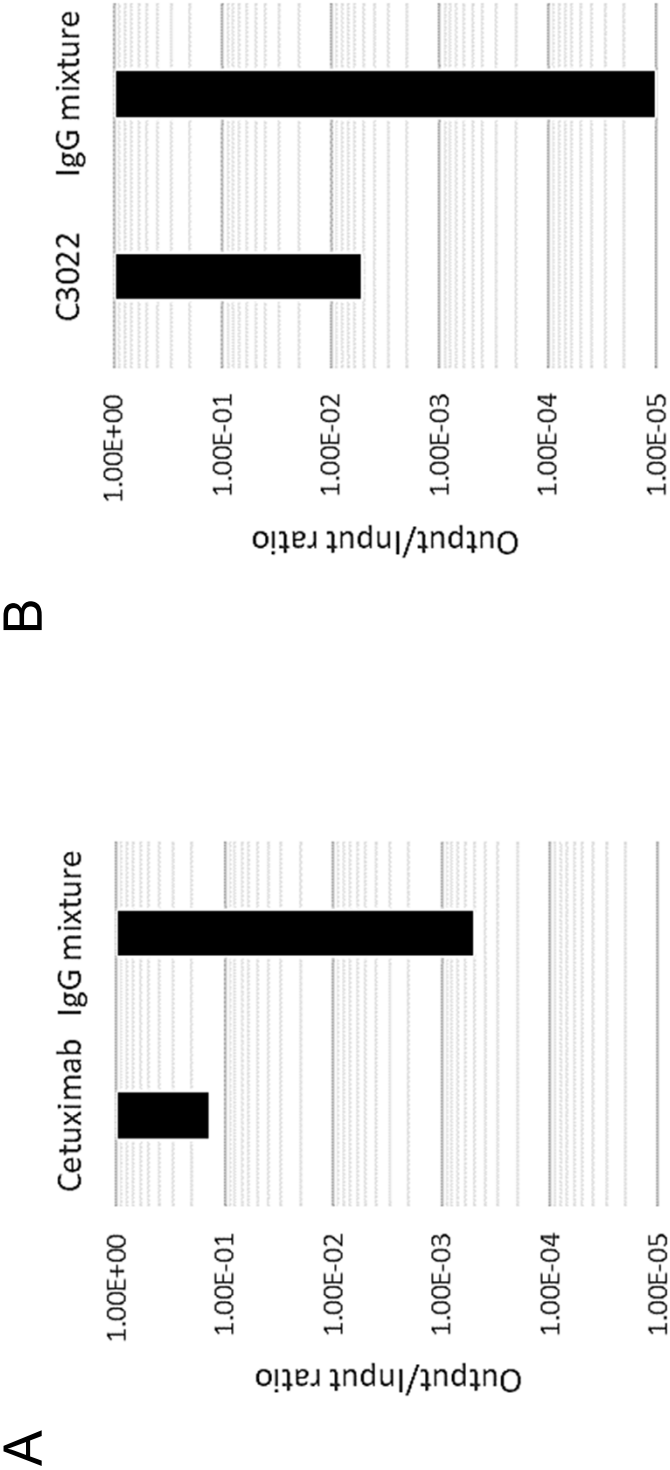


Fig. 18

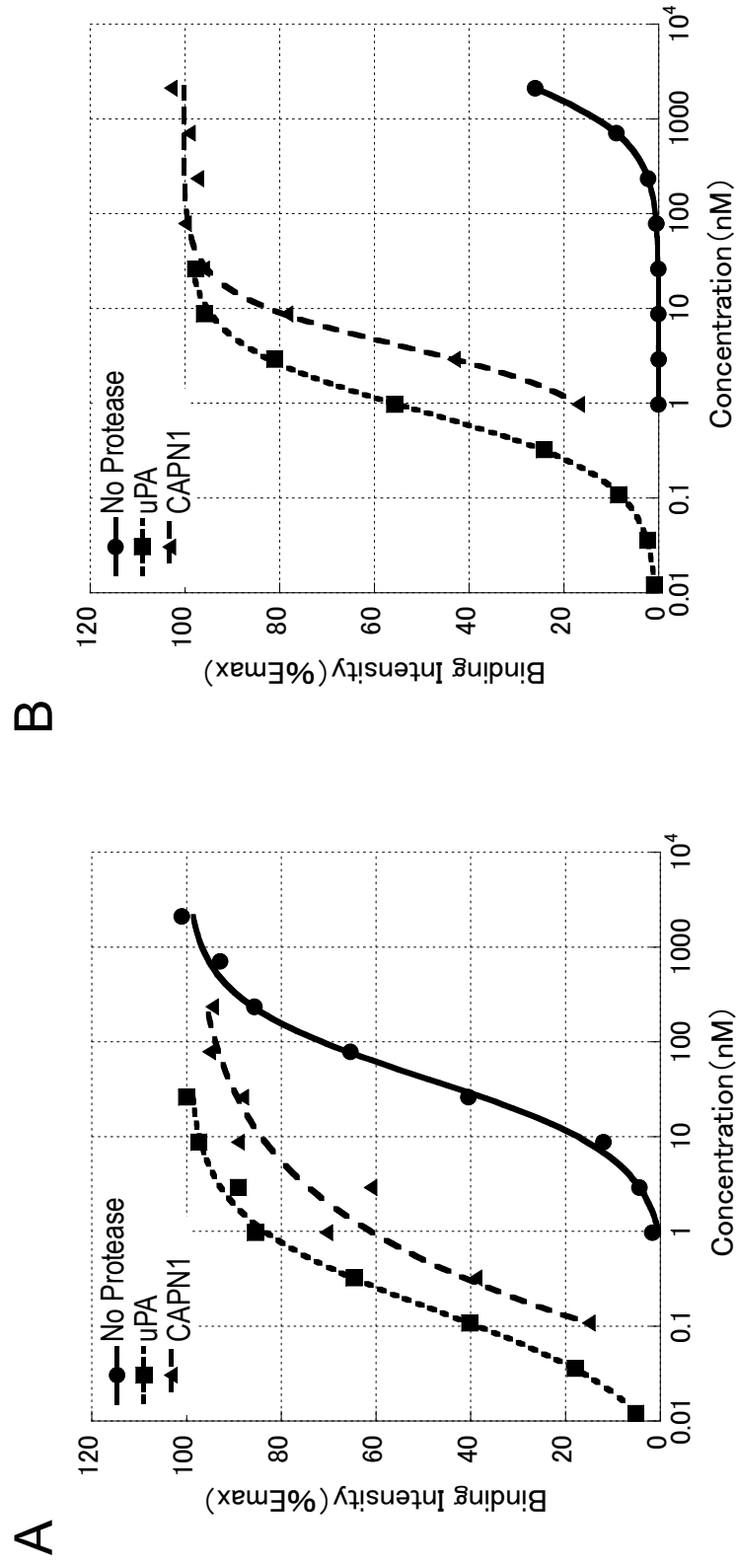
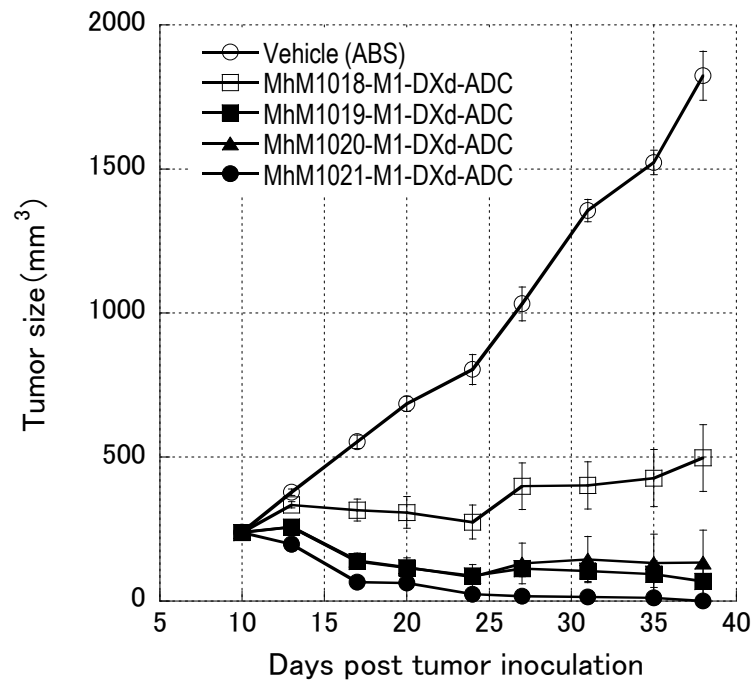


Fig. 19

A



B

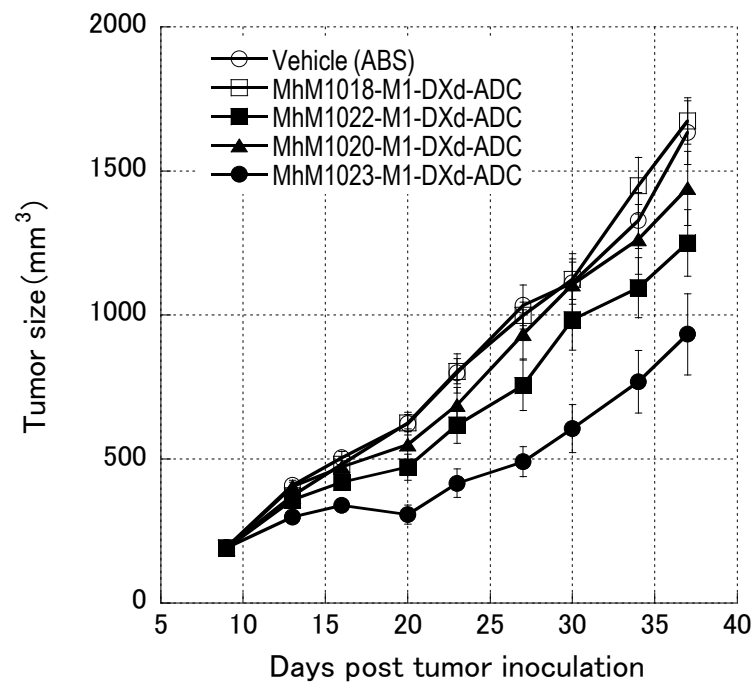
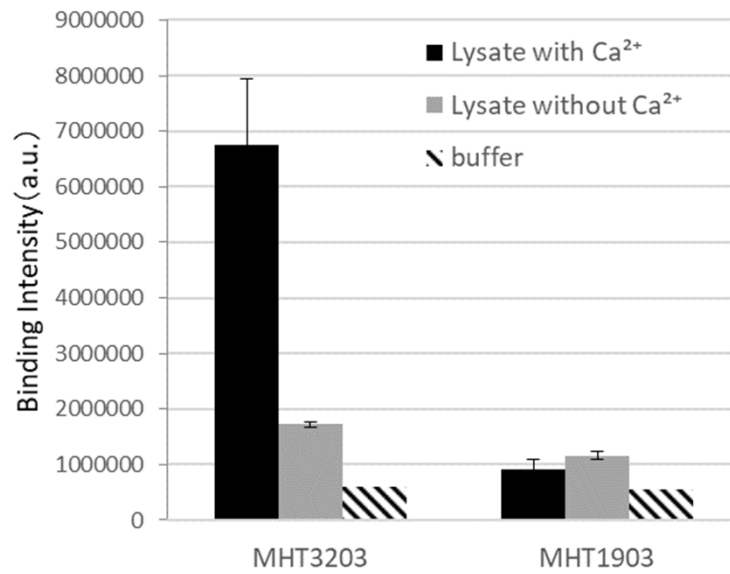


Fig. 20

A



B

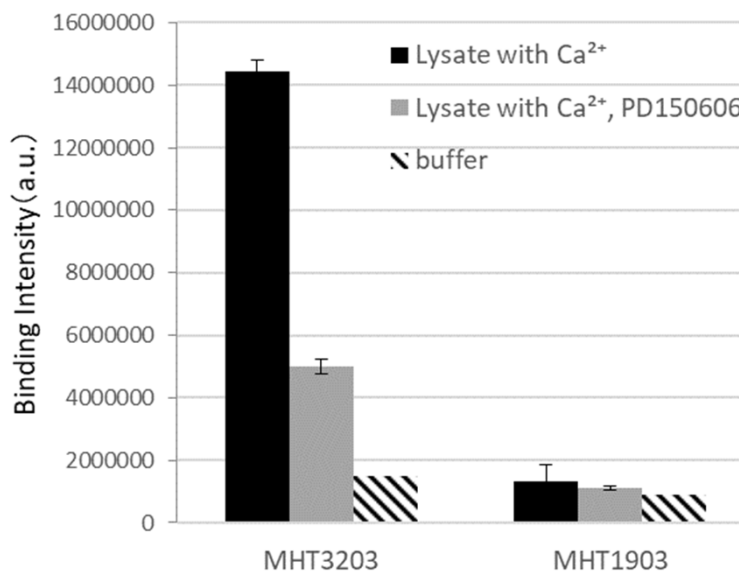


Fig. 21

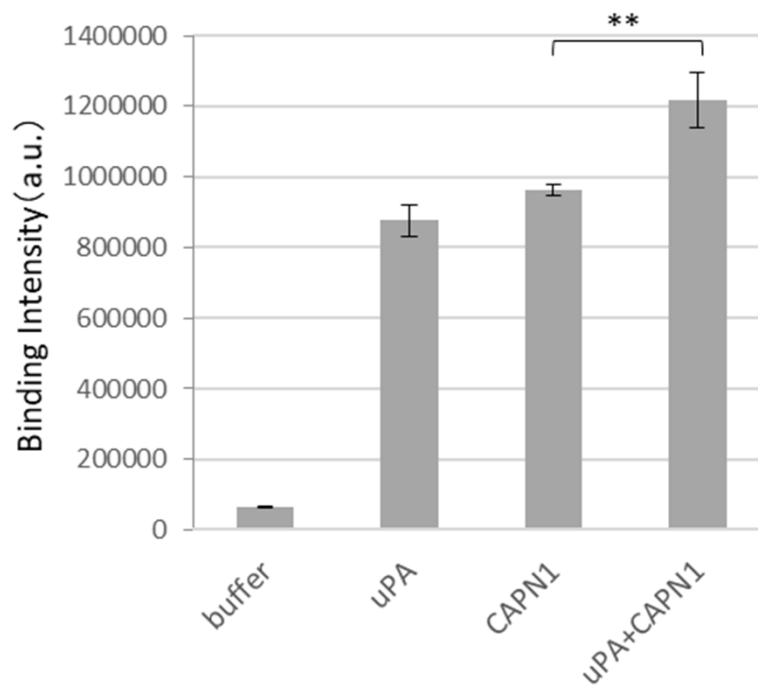


Fig. 22

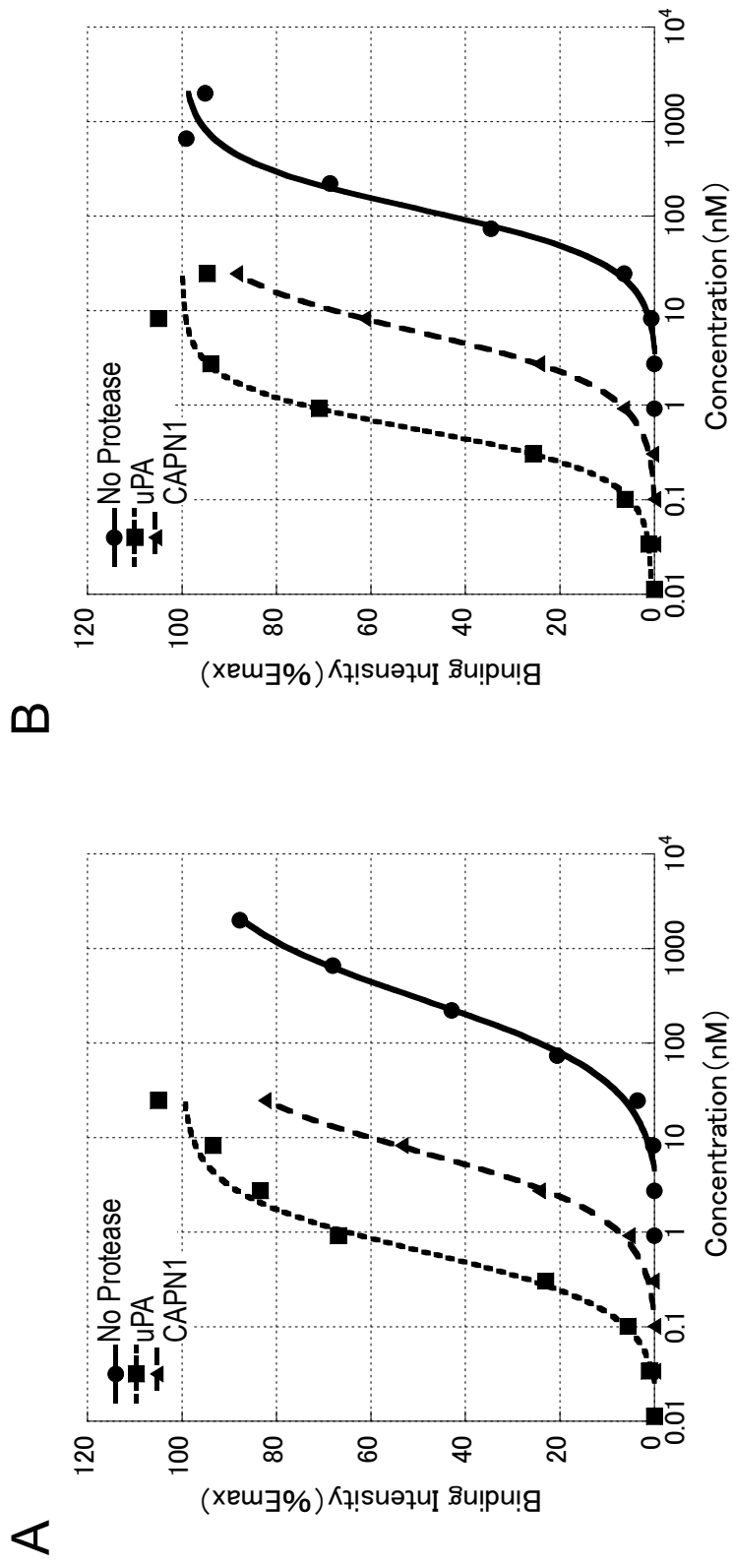
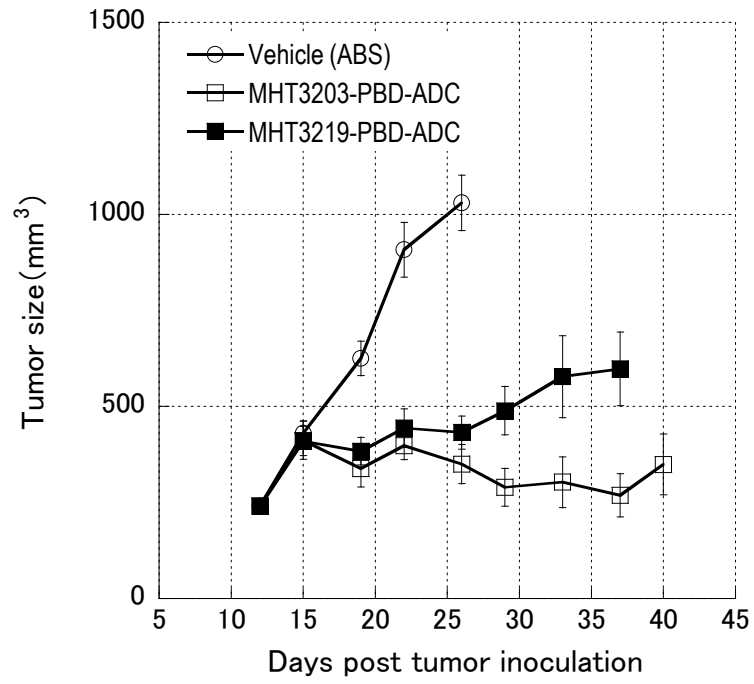


Fig. 23

A



B

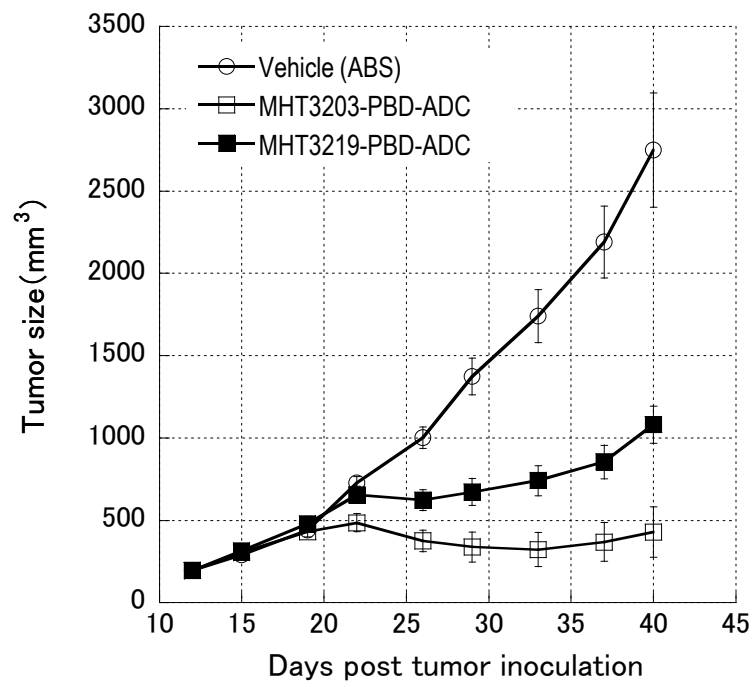


Fig. 24

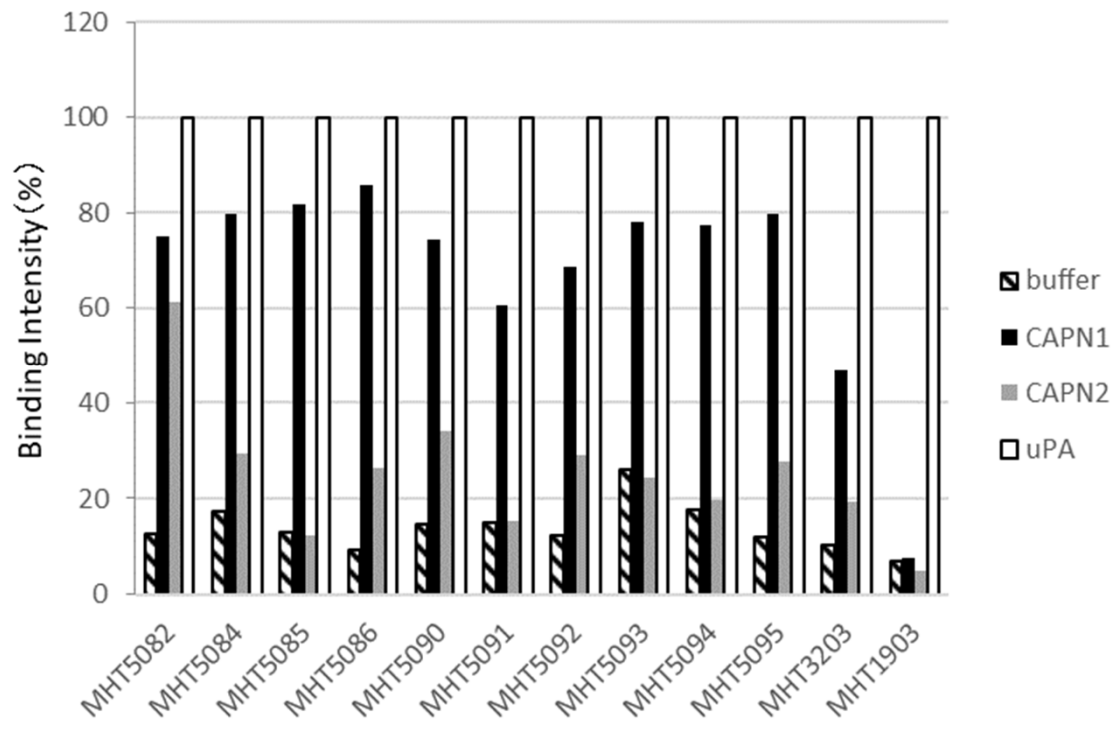
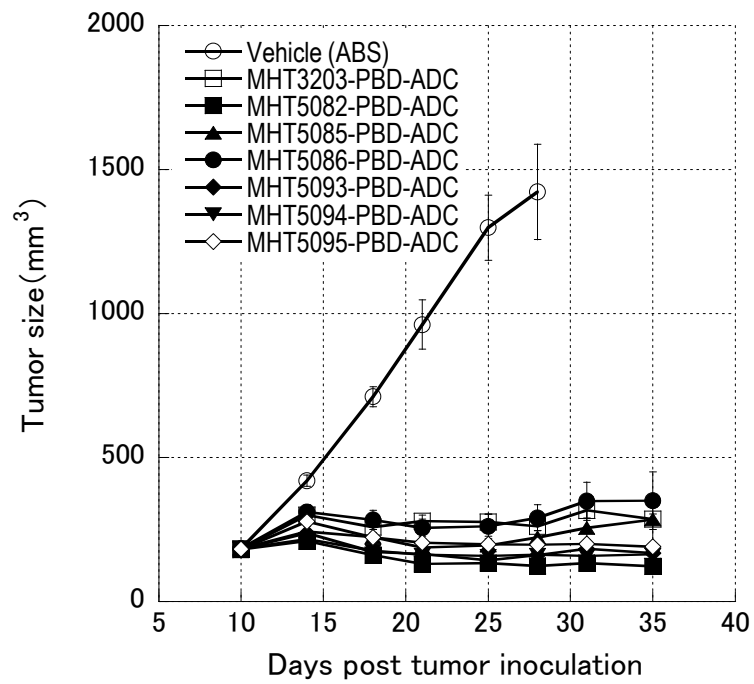


Fig. 25

A



B

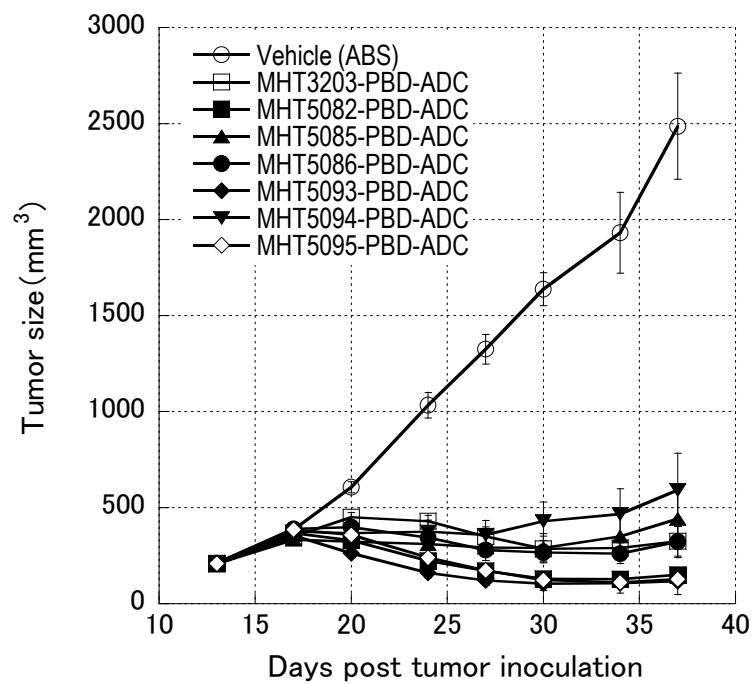


Fig. 26

Amino acid sequence of full-length HT1-11 H chain

MKHLWFFLLLVAAAPRWVLSQVQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWV
RQAPGQGLEWMGWINTHSGVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAV
YYCARSGFGSSYWYFDVWGQGTILVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCL
VKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICN
VNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPE
VTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDW
LNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLV
KGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFC
SVMHEALHNHYTQKSLSLSPGK

(SEQ ID NO: 1) signal sequence (1-19), antibody heavy
chain sequence (20-470)

Fig. 27

Amino acid sequence of full-length HT1-11 L chain

MVLQTQVFISLLLWISGAYGDIQMTQSPSSLSASVGDRVTITCKASQDVSTAVAWY
QQKPGKAPKLLIYSASYRYTGVPSRFSGSGSGTDFTLTISSLQPEDFAVYYCQQHY
ITPLTFGQGKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQW
KVDNALQSGNSQESVTEQDSKDSSTLSKADYEKHKVYACEVTHQGLSSP
VTKSFNRGEC

(SEQ ID NO: 2) signal sequence (1-20), antibody light
chain sequence (21-234)

Fig. 28

Amino acid sequence of full-length MHT1001

MKYLLPTAAAGLLLLLAAQPAMAAMGYLALKHPWPGLAENSGSGGGGSLVPMAMMA
SGGSDVNSQVQLVQSGAEVKKPGASVKVSCKASGYTFITTAGMQWVRQAPGQGLEWM
GWINTHSGVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARSFGSS
YWYFDVWGQGTLLVTVSSGGGGSGGGGSGGGGSDIQMTQSPSSLSASVGDRVITCK
ASQDVSTAVAWYQQKPGKAPKLLIYSASYRYTGVPSSRFSGSGSGTDFTLTISSLQP
EDFAVYYCQQHYITPLTFGQGTKLEIKRGAPSGDYKDDDDKGAHHHHHHH

(SEQ ID NO: 3) signal sequence (1-23), mimotope peptide
(24-40), MMP cleavable linker (41-60), HT1-11-scFv-HL
(65-308), FLAG-His tag (309-331)

Fig. 29

Amino acid sequence of full-length MHT1002

MKYLLPTAAAGLLLLLAAQPAMAAMGYLALKHPWPGLAENSGSGGGGSVLVPMAMMA
SGGSDVNSDIQMTQSPSSLSASVGDRVITITCKASQDVSTAVAWYQQKPGKAPKLLI
YSASYRYTGVPSRFSGSGSGTDFTLTISSLQPEDFAVYYCQQHYITPLTFGQGTKL
EIKRGGGGSGGGGSGGGGSQVQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWV
RQAPGQGLEWMGWINTHSGVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAV
YYCARSGFGSSYWFYFDVWGQGTLVTVSSGAPSGDYKDDDDKGAAAHHHHHH

(SEQ ID NO: 4) signal sequence (1-23), mimotope peptide
(24-40), MMP cleavable linker (41-60), HT1-11-scFv-LH
(65-308), FLAG-His tag (309-331)

Fig. 30

Amino acid sequence of full-length HT1-11-scFv-HL
MKYLLPTAAAGLLLLLAAQPAMAADVNSQVQLVQSGAEVKKPGASVKVSCKASGYTF
TTAGMQWVRQAPGQGLEWMGWINTHSGVPKYAEDFKGRVTISADTSTSTAYLQLSS
LKSEDTAVYYCARSFGSSYWFVDVWGQGTLVTVSSGGGGSGGGGSGGGGSDIQMT
QSPSSLSASVGDRVTITCKASQDVSTAVAWYQQKPGKAPKLLIYSASYRYTGVPSR
FSGSGSGTDFTLTISLQPEDFAVYYCQQHYITPLTFGQGTKLEIKRGAPSGDYKD
DDDKGAAAHHHHHH

(SEQ ID NO: 5) signal sequence (1-23), HT1-11-scFv-HL
(28-271), FLAG-His tag (272-294)

Fig. 31

Amino acid sequence of full-length HT1-11-scFv-LH
MKYLLPTAAAGLLLLLAAQPAMAADVNSDIQMTQSPSSLSASVGDRVITITCKASQDV
STAVAWYQQKPGKAPKLLIYSASYRYTGVPSTRFSGSGSGTDFTLTISLQPEDFAV
YYCQQHYITPLTFGQGTKLEIKRGGGSGGGGSGGGGSQVQLVQSGAEVKKPGASV
KVSCKASGYTFTTAGMQWVRQAPGQGLEWMGWINTHSGVPKYAEDFKGRVTISADT
STSTAYLQLSSLKSEDTAVYYCARSFGSSYWFVDVWGQGTLVTVSSGAPSGDYKD
DDDKGAAAHHHHHH

(SEQ ID NO: 6) signal sequence (1-23), HT1-11-scFv-
LH(28-271), FLAG-His tag (272-294)

Fig. 32

Amino acid sequence of full-length MHT1007 H chain

MKHLWFFLLLVAAPRWVLSGYLALKHPWPGLAENSGSGGGGSVLVPMAMMASGGSQ
VQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGQGLEWMGWINTHSGV
PKYAEDFKGRVTISADTSTSTAYLQLSSLKSED TAVYYCARS GFGSSYWFVDVWGQ
GTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTS
GVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCD
KTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNW
YVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIE
KTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPEN
NYKTTTPPVLDSDGSFFLYSKLTVDKSRWQQGNV FSCSV MHEALHNHYTQKSLSLSP
GK

(SEQ ID NO: 7) signal sequence (1-19), mimotope peptide
(20-35), MMP cleavable linker (36-55), antibody heavy
chain sequence (56-506)

Fig. 33

Amino acid sequence of full-length MHT1008 H chain

MKHLWFFLLLVAAAPRWVLSGYLALKHPWPGLAENSGSGGGGSGGGGSGGGGSGGSQ
VQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGQGLEWMGWINTHSGV
PKYAEDFKGRVTISADTSTSTAYLQLSSLKSED TAVYYCARS GFGSSYWFVDVWGQ
GTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTS
GVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCD
KTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNW
YVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIE
KTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPEN
NYKTTTPPVLDSDGSFFLYSKLTVDKSRWQQGNV FSCSV MHEALHNHYTQKSLSLSP
GK

(SEQ ID NO: 8) signal sequence (1-19), mimotope peptide
(20-35), uncleavable linker (36-55), antibody heavy
chain sequence (56-506)

Fig. 34

Amino acid sequence of full-length MHT1009 H chain

MKHLWFFLLLVAAAPRWVLSGYLALKHPWPGLAENSGSGSGSGSGRSANAILEGGSQ
VQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGQGLEWMGWINTHSGV
PKYAEDFKGRVTISADTSTSTAYLQLSSLKSED TAVYYCARS GFGSSYWFVDVWGQ
GTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTS
GVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCD
KTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNW
YVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIE
KTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPEN
NYKTTTPPVLDSDGSFFLYSKLTVDKSRWQQGNV FSCSV MHEALHNHYTQKSLSLSP
GK

(SEQ ID NO: 9) signal sequence (1-19), mimotope peptide
(20-35), uPA cleavable linker (36-55), antibody heavy
chain sequence (56-506)

Fig. 35

Amino acid sequence of full-length MHT3002 H chain

MKHLWFFLLLVAAAPRWVLSGYLALKHPWPGLAEGSGGGGSGGGGSGPLFAARGGSQ
VQLVQSGAEVKKPGASVKVSCASGYTFTTAGMQWVRQAPGQGLEWMGWINTHSGV
PKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDVAVYYCARSFGSSYWFVDVWGQ
GTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTS
GVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCD
KTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNW
YVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIE
KTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPEN
NYKTTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSQSVMSHEALHNHYTQKSLSLSP
GK

(SEQ ID NO: 10) signal sequence (1-19), mimotope
peptide (20-35), CAPN substrate (47-52) in CAPN
cleavable linker (36-55), antibody heavy chain sequence
(56-506)

Fig. 36

Amino acid sequence of full-length human CAPN1

SEEIITPVYCTGVSAQVQKQRARELGLGRHENA IKYLGQDYEQLRVRCLQSGTLFR
DEAFPPVPQSLGYKDLGPNSSKTYGIKWKRPTELL SNPQFIVDGATRTRD ICQGALG
DCWLLAAIASLT LNDTLLHRVVPHGQSFQNGYAGIFHFQLWQFGEWVDVVDDLLP
IKDGKLVFVHSAEGNEFW SALLEKAYAKVNGSYEALSGGSTSEGFEDFTGGVTEWY
ELRKAPSDLYQIILKALERGSLLGCSIDISSVLDMEAITFKKLVKGHAYSVTGAKQ
VNYRGQVVSLIRMRNPWGEVEWTGAWS DSSSEWNNVDPYERDQLRVKMEDGEFWMS
FRDFMREFTRLEICNLTPDALKSRTIRKWN TTLYEGTWRRGSTAGGCRNYPATFWV
NPQFKIRLDETDDPDDYGDRESGCSFVLALMQKHRRRERRRFRGRDMETIGFAVYEV
PELVGQPAVHLKRDFFLANASRARSEQFINLREVSTRFRLPPGEYVVPSTFEPNK
EGDFVLRFFSEKSAGTVELDDQIQANLPDEQVLSEEEIDENFKALFRQLAGEDMEI
SVKELRTILNRIISKHKDLRTKGFSLESCRS MVNLMDRDGNGKLGIVEFNILWNRI
RNYLSIFRKFDLDKSGSMSAYEMRMAIESAGFKLNKKLYELIITRYSEPDLAVDFD
NFVCCLVRLETMFRRFFKTLDTDL DGVVTFDLFKWLQ LTMFA

(SEQ ID NO: 11) CAPN sequence (1-713) with the start
methionine being removed

Fig. 37

Amino acid sequence of novel CAPN substrate

PLFAAP

(SEQ ID NO: 12) CAPN substrate that is not cleaved by
uPA

Fig. 38

Amino acid sequence of full-length MHT3201 H chain

MKHLWFFLLLVAAAPRWVLSGYLALKHPWPGLAEGSGGGGSGGGGSGPLFAAPGGSQ
VQLVQSGAEVKKPGASVKVSCASGYTFTTAGMQWVRQAPGQGLEWMGWINTHSGV
PKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARSFGSSYWFVDVWGQ
GTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTS
GVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCD
KTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNW
YVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIE
KTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPEN
NYKTTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSQSVMHEALHNHYTQKSLSLSP
GK

(SEQ ID NO: 13) signal sequence (1-19), mimotope
peptide (20-35), CAPN cleavable linker (36-55), antibody
heavy chain sequence (56-506)

Fig. 39

Amino acid sequence of full-length MHT3202 H chain

MKHLWFFLLLVAAAPRWVLSGYLALKHPWPGLAEGSGGGGSGRSAGGPLFAAPGGSQ
VQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGQGLEWMGWINTHSGV
PKYAEDFKGRVTISADTSTSTAYLQLSSLKSED TAVYYCARS GFGSSYWFVDVWGQ
GTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTS
GVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCD
KTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNW
YVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIE
KTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPEN
NYKTTTPPVLDSDGSFFLYSKLTVDKSRWQQGNV FSCSV MHEALHNHYTQKSLSLSP
GK

(SEQ ID NO: 14) signal sequence (1-19), mimotope
peptide (20-35), uPA + CAPN cleavable linker (36-55),
antibody heavy chain sequence (56-506)

Fig. 40

Amino acid sequence of full-length MHT1713 H chain

MKHLWFFLLLVAAPRWVLSGYLALKHPWPGLAEGSGGGGSGRSAGGPLGLWAGGSQ
VQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGQGLEWMGWINTHSGV
PKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARSFGSSYWFVDVWGQ
GTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTS
GVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCD
KTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNW
YVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIE
KTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPEN
NYKTTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSQSVMHEALHNHYTQKSLSLSP
GK

(SEQ ID NO: 15) signal sequence (1-19), mimotope
peptide (20-35), uPA + MMP cleavable linker (36-55),
antibody heavy chain sequence (56-506)

Fig. 41

Amino acid sequence of full-length MHT3423 H chain

MKHLWFFLLLVAAAPRWVLSGYLALKHPWPGLAEGSGGGGSGRSAGGGGGSGGGGSG
GGGSGGGGSQVQLVQSGAEVKKPGASVKVSCKASGYTFITTAGMQWVRQAPGQGLEW
MGWINTHSGVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARSFGFS
SYWYFDVWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVT
VSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKV
DKRVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVS
HEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKV
SNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAV
EWESNGQPENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSQSVSMHEALHNH
YTQKSLSLSPGK

(SEQ ID NO: 16) signal sequence (1-19), mimotope
peptide (20-35), uPA cleavable linker (36-65), antibody
heavy chain sequence (66-516)

Fig. 42

Amino acid sequence of full-length MHT3203 H chain

MKHLWFFLLLVAAPRWVLSGYLALKHPWPGLAEGSGGGGSGRSANAGGPLFAAPGG
SQVQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGGGLEWMGWINTHS
GVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARGSGFGSSYWFVDVW
GQGTLLTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGAL
TSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS
CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKF
NWFYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAP
IEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQP
ENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSQSVMEALHNHYTQKSLSL
SPGK

(SEQ ID NO: 17) signal sequence (1-19), mimotope
peptide (20-35), uPA + CAPN cleavable linker (36-57),
antibody heavy chain sequence (58-508)

Fig. 43

Amino acid sequence of full-length hM23H1L1 H chain
MKHLWFFLLLVAAPRWVLSQVQLVQSGAEVKKPGASVKVSCKASGYAFSNYLIEWV
RQAPGQGLEWMGVINPGSGVTNYNEKFKGRVTITADTSTSTAYMELSSLRSEDVAV
YYCARAEAWFAYWGQGTLLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYF
PEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKP
SNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCV
VVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKE
YKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYP
SDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSVSMHE
ALHNHYTQKSLSLSPGK

(SEQ ID NO: 18) signal sequence (1-19), antibody heavy
chain sequence (20-465)

Fig. 44

Amino acid sequence of full-length hM23H1L1 L chain

MVLQTQVFISLLLWISGAYGDIVMTQSPDSLAVSLGERATINCKSSQSLLYSSNQK
NYLAWYQQKPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISLQAEDVAVY
YCQRYYGYPWTFGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPR
EAKVQWKVDNALQSGNSQESVTEQDSKSTYLSSTLTLSKADYEKHKVYACEVTH
QGLSSPVTKSFNRGEC

(SEQ ID NO: 19) signal sequence (1-20), antibody light
chain sequence (21-240)

Fig. 45

Amino acid sequence of full-length MhM1008 L chain

MVLQTQVFISLLLWISGAYGGENMWNDLDLVPLGILGSGGGGSVLVPMAMMASGGS
DIVMTQSPDSLAVSLGERATINCKSSQSLLYSSNQKNYLAWYQQKPGQPPKLLIYW
ASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQRYYGYPWTFGQGTKVEI
KRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

(SEQ ID NO: 20) signal sequence (1-20), mimotope
peptide (21-36), MMP cleavable linker (37-56), antibody
light chain sequence (57-276)

Fig. 46

Amino acid sequence of full-length MhM1013 L chain

MVLQTQVFISLLLWISGAYGGNFYHQYPWPLEILGSGSGGGGSVLVPMAMMASGGS
DIVMTQSPDSLAVSLGERATINCKSSQSLLYSSNQKNYLAWYQQKPGQPPKLLIYW
ASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQRYYGYPWTFGQGTKVEI
KRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

(SEQ ID NO: 21) signal sequence (1-20), mimotope
peptide (21-36), MMP cleavable linker (37-56), antibody
light chain sequence (57-276)

Fig. 47

Amino acid sequence of full-length hM23-M1 H chain

MKHLWFFLLLVAAPRWVLSQVQLVQSGAEVKKPGASVKVSCKASGAAFSNYLIEWV
RQAPGQGLEWMGVINPGSGVTNYNEKFKGRVTITADTSTSTAYMELSSLRSED
TAVYYCARAEAWFAYWGQGTILVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYF
PEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKP
SNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCV
VVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKE
YKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYP
SDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFS
CSVMHEALHNHYTQKSLSLSPGK

(SEQ ID NO: 22) signal sequence (1-19), antibody heavy chain sequence (20-465)

Fig. 48

Amino acid sequence of full-length hM23-M1 L chain

MVLQTQVFISLLLWISGAYGDIVMTQSPDSLAVSLGERATINCKSSQSLLYSSNQK
NYLAWYQQKPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISLQAEDVAVY
YCQRYYGYPWTFGQGTKVEIKRAVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPR
EAKVQWKVDNALQSGNSQESVTEQDSKSTYLSSTLTLSKADYEKHKVYACEVTH
QGLSSPVTKSFNRGEC

(SEQ ID NO: 23) signal sequence (1-20), antibody light
chain sequence (21-240)

Fig. 49

Amino acid sequence of full-length MhM1018-M1 L chain
MVLQTQVFISLLLWISGAYGGNFYHQYPWPLEILGSGSGGGGSGGGGSGGGGSGGS
DIVMTQSPDSLAVSLGERATINCKSSQSLLYSSNQKNYLAWYQQKPGQPPKLLIYW
ASTRESGVDPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQRYYGYPWTFGQGTKVEI
KRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

(SEQ ID NO: 24) signal sequence (1-20), mimotope
peptide (21-36), uncleavable linker (37-56), antibody
light chain sequence (57-276)

Fig. 50

Amino acid sequence of full-length MhM1019-M1 L chain
MVLQTQVFISLLLWISGAYGGNFYHQYPWPLEILGSGGGGSGRSANAGGSGGGGSG
GSDIVMTQSPDSLAVSLGERATINCKSSQSLLYSSNQKNYLAWYQQKPGQPPKLLI
YWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQRYYGYPWTFGQGTKV
EIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNFPREAKVQWKVDNALQSGNSQ
ESVTEQDSKDSSTYLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

(SEQ ID NO: 25) signal sequence (1-20), mimotope
peptide (21-36), uPA cleavable linker (37-58), antibody
light chain sequence (59-278)

Fig. 51

Amino acid sequence of full-length MhM1020-M1 L chain
MVLQTQVFISLLLWISGAYGGNFYHQYPWPLEILGSGGGGSGGGGSGGGPLFAAPG
GSDIVMTQSPDSLAVSLGERATINCKSSQSLLYSSNQKNYLAWYQQKPGQPPKLLI
YWASTRESGVPDRFSGSGGTDFTLTISSLQAEDVAVYYCQRYYGYPWTFGQGTKV
EIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNFPREAKVQWKVDNALQSGNSQ
ESVTEQDSKDSSTLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

(SEQ ID NO: 26) signal sequence (1-20), mimotope
peptide (21-36), CAPN cleavable linker (37-58), antibody
light chain sequence (59-278)

Fig. 52

Amino acid sequence of full-length MhM1021-M1 L chain
MVLQTQVFISLLLWISGAYGGNFYHQYPWPLEILGSGGGGSGRSANAGGPLFAAPG
GSDIVMTQSPDSLAVSLGERATINCKSSQSLLYSSNQKNYLAWYQQKPGQPPKLLI
YWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQRYYGYPWTFGQGTKV
EIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNFPREAKVQWKVDNALQSGNSQ
ESVTEQDSKDSSTYLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

(SEQ ID NO: 27) signal sequence (1-20), mimotope
peptide (21-36), uPA + CAPN cleavable linker (37-58),
antibody light chain sequence (59-278)

Fig. 53

Amino acid sequence of full-length MhM1022-M1 L chain
MVLQTQVFISLLWISGAYGGNFYHQYPWPLEILGSGGGGSPLGLAGGGSGGGGSG
GSDIVMTQSPDSLAVSLGERATINCKSSQSLLYSSNQKNYLAWYQQKPGQPPKLLI
YWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQRYYGYPWTFGQGTKV
EIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNFPREAKVQWKVDNALQSGNSQ
ESVTEQDSKDSSTYLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

(SEQ ID NO: 28) signal sequence (1-20), mimotope
peptide (21-36), MMP cleavable linker (37-58), antibody
light chain sequence (59-278)

Fig. 54

Amino acid sequence of full-length MhM1023-M1 L chain
MVLQTQVFISLLLWISGAYGGNFYHQYPWPLEILGSGGGGSPLGLAGGGPLFAAPG
GSDIVMTQSPDSLAVSLGERATINCKSSQSLLYSSNQKNYLAWYQQKPGQPPKLLI
YWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQRYYGYPWTFGQGTKV
EIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNFPREAKVQWKVDNALQSGNSQ
ESVTEQDSKDSSTYLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

(SEQ ID NO: 29) signal sequence (1-20), mimotope
peptide (21-36), MMP + CAPN cleavable linker (37-58),
antibody light chain sequence (59-278)

Fig. 55

Amino acid sequence of full-length Cetuximab H chain
MKHLWFFLLLVAAPRWVLSQVQLKQSGPGLVQPSQSL SITCTVSGFSLTNYGVHWV
RQSPGKGLEWLGVIWSSGGNTDYNTPTFTSRLSINKDNSKSQVFFKMNSLQSNDAIY
YCARALTYDYEFAYWGQGLVTVSAASTKGPSVFPLAPSSKSTSGGTAALGCLVK
DYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVPSSSLGTQTYICNVN
HKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEV
TCVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLN
GKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKG
FYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFCFV
MHEALHNHYTQKSLSLSPGK

(SEQ ID NO: 30) signal sequence (1-19), antibody heavy
chain sequence (20-468)

Fig. 56

Amino acid sequence of full-length Cetuximab L chain
MVLQTQVFISLLLWISGAYGDILLTQSPVILSVSPGERVSFSCRASQSIGTNIHWY
QQRTNGSPRLLIKYASESISGIPSRFSGSGSGTDFTLSINSVESEDIADYYCQQNN
NWPTTFGAGTKLELKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQW
KVDNALQSGNSQESVTEQDSKDSSTLSLTLSKADYEKHKVYACEVTHQGLSSP
VTKSFNRGEC

(SEQ ID NO: 31) signal sequence (1-20), antibody light
chain sequence (21-234)

Fig. 57

Amino acid sequence of full-length C3022 H chain

MKHLWFFLLLVAAPRWVLSQVQLVQSGAEVKKPGASVKVSCKASGYTFTGYMHV
RQAPGQGLEWMGRINPNSGGTNYAQKFQGRVTMTRDTSISTAYMELSGLRSDDTAV
YYCASGSVRHPWGQGLTVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFP
EPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVPSSSLGTQTYICNVNHKPS
NTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVV
VDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEY
KCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPS
DIAVEWESNGQPENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEA
LHNHYTQKSLSLSPGK

(SEQ ID NO: 32) signal sequence (1-19), antibody heavy
chain sequence (20-464)

Fig. 58

Amino acid sequence of full-length C3022 L chain

MVLQTQVFISLLLWISGAYGQPVLTQPPSASGTPGQRVTISCSGSRSNIGGNIVSW
YQQFPGTAPRLLTYADNQRPSGVPDRFSGSKSGTSASLAISGLQSEDEADYYCAAW
DDSLNGVVFGGGTKLTVLGQPKAAPSVTLFPPSSEELQANKATLVCLISDFYPGAV
TVAWKADSSPVKAGVETTTPSKQSNNKYAASSYLSLTPEQWKSHRSYSCQVTHEGS
TVEKTVAPTECS

(SEQ ID NO: 33) signal sequence (1-20), antibody light
chain sequence (21-236)

Fig. 59

Amino acid sequence of full-length MCE-2105 L chain

MVLQTQVFISLLLWISGAYGMGLMHMEKSRSWYLSRQGGGGSGRSANAGGPLFAAP
GGSDILLTQSPVILSVSPGERVVSFSCRASQSIGTNIHWYQQRTNGSPRLLIKYASE
SISGIPSRFSGSGSGTDFTLSINSVESEDIADYYCQQNNNWPTTFGAGTKLELKRT
VAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTE
QDSKDSITYSLSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

(SEQ ID NO: 34) signal sequence (1-20), mimotope
peptide (22-37), uPA + CAPN cleavable linker (38-59),
antibody light chain sequence (60-273)

Fig. 60

Amino acid sequence of full-length MC3-9003 H chain
MKHLWFFLLLVAAPRWVLSGETMSVFTRDYFTETPGGGGSGRSANAGGPLFAAPGG
SQVQLVQSGAEVKKPGASVKVSCKASGYTFTGYMHWVRQAPGQGLEWMGRINPNS
GGTNYAQKFQGRVTMTRDTSISTAYMELSGLRSDDTAVYYCASGSVRHPWGQGTLV
TVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHT
FPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHT
CPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDG
VEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTIS
KAKGQPREPQVYITLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKT
TPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK
(SEQ ID NO: 35) signal sequence (1-19), mimotope
peptide (20-35), uPA + CAPN cleavable linker (36-57),
antibody heavy chain sequence (58-502)

Fig. 61

Amino acid sequence recognized by human uPA and serving as a substrate therefor

SGRSANAILE (SEQ ID NO: 36)

SGRSANA (SEQ ID NO: 37)

SGRSA (SEQ ID NO: 38)

Amino acid sequence recognized by human MMP1 and serving as a substrate therefor

VLVPMAMMAS (SEQ ID NO: 39)

PLGLWA (SEQ ID NO: 40)

Amino acid sequence recognized by human MMP9 and serving as a substrate therefor

PLGLAG (SEQ ID NO: 41)

Fig. 62

Amino acid sequence of full-length MHT1903 H chain

MKHLWFFLLLVAAPRWVLSGYLALKHPWPGLAEGSGGGGSGRSANAGGSGGGGSGG
SQVQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGQGLEWMGWINTHS
GVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARGSGFGSSYWFVDVW
GQGTLLTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGAL
TSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS
CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKF
NWFYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAP
IEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQP
ENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSQVMSVMEALHNHYTQKSLSL
SPGK

(SEQ ID NO: 42) signal sequence (1-19), mimotope
peptide (20-35), uPA cleavable linker (36-57), antibody
heavy chain sequence (58-508)

Fig. 63

Amino acid sequence of full-length MHT3219 H chain

MKHLWFFLLLVAAPRWVLSGYLALKHPWPGLAEGSGGGGPLFAAPGGSGRSANAGG
SQVQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGGGLEWMGWINTHS
GVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARGSGFGSSYWFVDVW
GQGTLLTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGAL
TSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS
CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKF
NWFYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAP
IEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQP
ENNYKTTTPVLDSGDSFFLYSKLTVDKSRWQQGNVFSQVMHEALHNHYTQKSLSL
SPGK

(SEQ ID NO: 43) signal sequence (1-19), mimotope
peptide (20-35), uPA + CAPN cleavable linker (36-57),
antibody heavy chain sequence (58-508)

Fig. 64

Amino acid sequence of novel CAPN substrate

FVFAMR (SEQ ID NO: 44)

FLFMVR (SEQ ID NO: 45)

FLFTMW (SEQ ID NO: 46)

LVFAVP (SEQ ID NO: 47)

FVFAWR (SEQ ID NO: 48)

FLFARM (SEQ ID NO: 49)

LLFSGR (SEQ ID NO: 50)

LLFGMR (SEQ ID NO: 51)

LFALRW (SEQ ID NO: 52)

LLFASW (SEQ ID NO: 53)

Fig. 65

Amino acid sequence of full-length MHT5082 H chain

MKHLWFFLLLVAAPRWVLSGYLALKHPWPGLAEGSGGGGSGRSANAGGFVFAMRGG
SQVQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGQGLEWMGWINTHS
GVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARGSGFGSSYWFVDVW
GQGTLLTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGAL
TSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS
CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKF
NWFYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAP
IEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQP
ENNYKTTTPVLDSGDSFFLYSKLTVDKSRWQQGNVFSQSVMEALHNHYTQKSLSL
SPGK

(SEQ ID NO: 54) signal sequence (1-19), mimotope
peptide (20-35), uPA + CAPN cleavable linker (36-57),
antibody heavy chain sequence (58-508)

Fig. 66

Amino acid sequence of full-length MHT5084 H chain

MKHLWFFLLLVAAPRWVLSGYLALKHPWPGLAEGSGGGGSGRSANAGGFLEFMRGG
SQVQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGQGLEWMGWINTHS
GVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARGSGFGSSYWFVDVW
GQGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGAL
TSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS
CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKF
NWFYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAP
IEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQP
ENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSQVMSVMEALHNHYTQKSLSL
SPGK

(SEQ ID NO: 55) signal sequence (1-19), mimotope
peptide (20-35), uPA + CAPN cleavable linker (36-57),
antibody heavy chain sequence (58-508)

Fig. 67

Amino acid sequence of full-length MHT5085 H chain

MKHLWFFLLLVAAPRWVLSGYLALKHPWPGLAEGSGGGSGRSANAGGFLETMWGG
SQVQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGQGLEWMGWINTHS
GVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARGSGFGSSYWFVDVW
GQGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGAL
TSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS
CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKF
NWFYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAP
IEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQP
ENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSQSVMEALHNHYTQKSLSL
SPGK

(SEQ ID NO: 56) signal sequence (1-19), mimotope
peptide (20-35), uPA + CAPN cleavable linker (36-57),
antibody heavy chain sequence (58-508)

Fig. 68

Amino acid sequence of full-length MHT5086 H chain

MKHLWFFLLLVAAPRWVLSGYLALKHPWPGLAEGSGGGGSGRSANAGGLVFAVPGG
SQVQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGGGLEWMGWINTHS
GVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARGSGFGSSYWFVDVW
GQGTLLTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGAL
TSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS
CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKF
NWFYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAP
IEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQP
ENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSQSVMEALHNHYTQKSLSL
SPGK

(SEQ ID NO: 57) signal sequence (1-19), mimotope
peptide (20-35), uPA + CAPN cleavable linker (36-57),
antibody heavy chain sequence (58-508)

Fig. 69

Amino acid sequence of full-length MHT5090 H chain

MKHLWFFLLLVAAPRWVLSGYLALKHPWPGLAEGSGGGGSGRSANAGGFVFAWRGG
SQVQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGQGLEWMGWINTHS
GVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARGSGFGSSYWFVDVW
GQGTLLTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGAL
TSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS
CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKF
NWFYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAP
IEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQP
ENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSQVMSVMEALHNHYTQKSLSL
SPGK

(SEQ ID NO: 58) signal sequence (1-19), mimotope
peptide (20-35), uPA + CAPN cleavable linker (36-57),
antibody heavy chain sequence (58-508)

Fig. 70

Amino acid sequence of full-length MHT5091 H chain

MKHLWFFLLLVAAPRWVLSGYLALKHPWPGLAEGSGGGGSGRSANAGGFLFARMGG
SQVQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGQGLEWMGWINTHS
GVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARGSGFGSSYWFVDVW
GQGTLLTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGAL
TSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS
CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKF
NWFYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAP
IEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQP
ENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSQSVMEALHNHYTQKSLSL
SPGK

(SEQ ID NO: 59) signal sequence (1-19), mimotope
peptide (20-35), uPA + CAPN cleavable linker (36-57),
antibody heavy chain sequence (58-508)

Fig. 71

Amino acid sequence of full-length MHT5092 H chain

MKHLWFFLLLVAAPRWVLSGYLALKHPWPGLAEGSGGGGSGRSANAGGLLFSGRGG
SQVQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGGGLEWMGWINTHS
GVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARGSGFGSSYWFVDVW
GQGTLLTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGAL
TSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS
CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKF
NWFYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAP
IEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQP
ENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSQSVSMHEALHNHYTQKSLSL
SPGK

(SEQ ID NO: 60) signal sequence (1-19), mimotope
peptide (20-35), uPA + CAPN cleavable linker (36-57),
antibody heavy chain sequence (58-508)

Fig. 72

Amino acid sequence of full-length MHT5093 H chain

MKHLWFFLLLVAAPRWVLSGYLALKHPWPGLAEGSGGGGSGRSANAGGLLFGMRGG
SQVQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGQGLEWMGWINTHS
GVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARGSGFGSSYWFVDVW
GQGTLLTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGAL
TSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS
CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKF
NWFYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAP
IEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQP
ENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSQSVMEALHNHYTQKSLSL
SPGK

(SEQ ID NO: 61) signal sequence (1-19), mimotope
peptide (20-35), uPA + CAPN cleavable linker (36-57),
antibody heavy chain sequence (58-508)

Fig. 73

Amino acid sequence of full-length MHT5094 H chain

MKHLWFFLLLVAAPRWVLSGYLALKHPWPGLAEGSGGGGSGRSANAGGLFALRWGG
SQVQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGQGLEWMGWINTHS
GVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARGSGFGSSYWFVDVW
GQGTLLTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGAL
TSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS
CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKF
NWFYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAP
IEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQP
ENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSQSVMHREALHNHYTQKSLSL
SPGK

(SEQ ID NO: 62) signal sequence (1-19), mimotope
peptide (20-35), uPA + CAPN cleavable linker (36-57),
antibody heavy chain sequence (58-508)

Fig. 74

Amino acid sequence of full-length MHT5095 H chain

MKHLWFFLLLVAAPRWVLSGYLALKHPWPGLAEGSGGGGSGRSANAGGLLFASWGG
SQVQLVQSGAEVKKPGASVKVSCKASGYTFTTAGMQWVRQAPGQGLEWMGWINTHS
GVPKYAEDFKGRVTISADTSTSTAYLQLSSLKSEDTAVYYCARGSGFGSSYWFVDVW
GQGTLLTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGAL
TSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS
CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKF
NWFYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAP
IEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQP
ENNYKTTTPVLDSGDSFFLYSKLTVDKSRWQQGNVFSQSVMEALHNHYTQKSLSL
SPGK

(SEQ ID NO: 63) signal sequence (1-19), mimotope
peptide (20-35), uPA + CAPN cleavable linker (36-57),
antibody heavy chain sequence (58-508)

Fig. 75

Amino acid sequence of MMP linker

GSGGGGSGGGSPGLWAGGS

(SEQ ID NO: 64) MMP substrate (12-17) as shown in SEQ
ID NO: 40