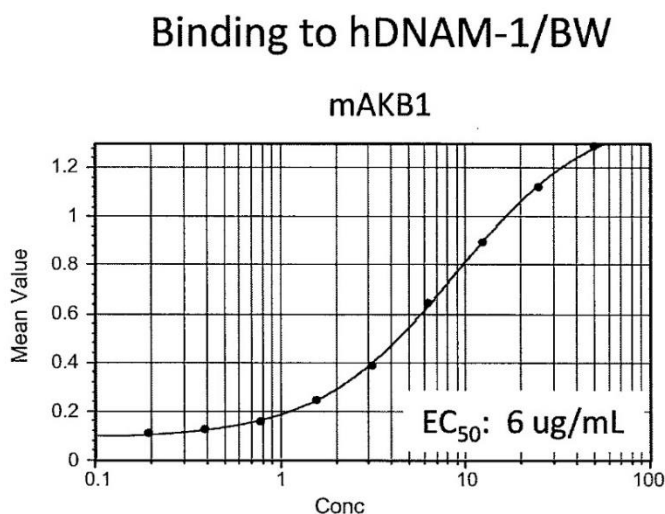


[Fig. 1]



[Fig. 2]

COMPARISON OF HEAVY CHAIN VARIABLE REGIONS

	1				2				3			
	123456789	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789
mAKB1	DVQLQESGP	GLVKPSQSLS	LTCSVTGYSI	TSGYYWNWIR								
hAKB1 VH1	QVQLQESGP	GLVKPSETLS	LTCTVSGYSI	TSGYYWNWIR								
hAKB1 VH2	QVQLQESGP	GLVKPSETLS	LTCTVSGYSI	SSGYYWNWIR								
FJ039783 VH	QVQLQESGP	GLVKPSETLS	LTCTVSGYSI	S-----WIR								

	4				5				6				7			
	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789	0123456789
mAKB1	QFPGNKLEWM	GYISYDGSNN	YNPSLKNRIS	ITRDTSKNQF												
hAKB1 VH1	QPPGKGLEWM	GYISYDGSNN	YNPSLKNRVT	ISRDTSKNQF												
hAKB1 VH2	QPPGKGLEWM	GYISYDGSNN	YNPSLKNRVT	ISRDTSKNQF												
FJ039783 VH	QPPGKGLEWI	G-----	-----RVT	ISVDTSKNQF												

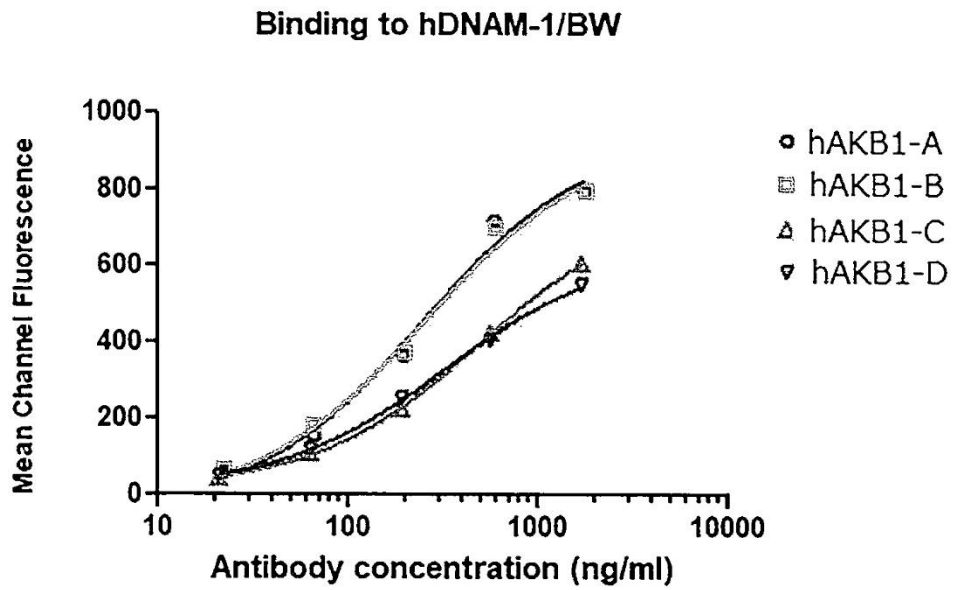
	1				1				1			
	8	9	0	1	2	3	4	5	6	7	8	9
mAKB1	FLKLNSVTTE	DTAVYYCARA	YYGNYVG YFD	VWGAGTTVTV	SS							
hAKB1 VH1	SLKLSSVTAA	DTAVYYCARA	YYGNYVG YFD	VWGQGT TVTV	SS							
hAKB1 VH2	SLKLSSVTAA	DTAVYYCARA	YYGNYVG YFD	VWGQGT TVTV	SS							
FJ039783 VH	SLKLSSVTAA	DTAVYYCAR-	-----	-WGQGT TVTV	SS							

[Fig. 3]

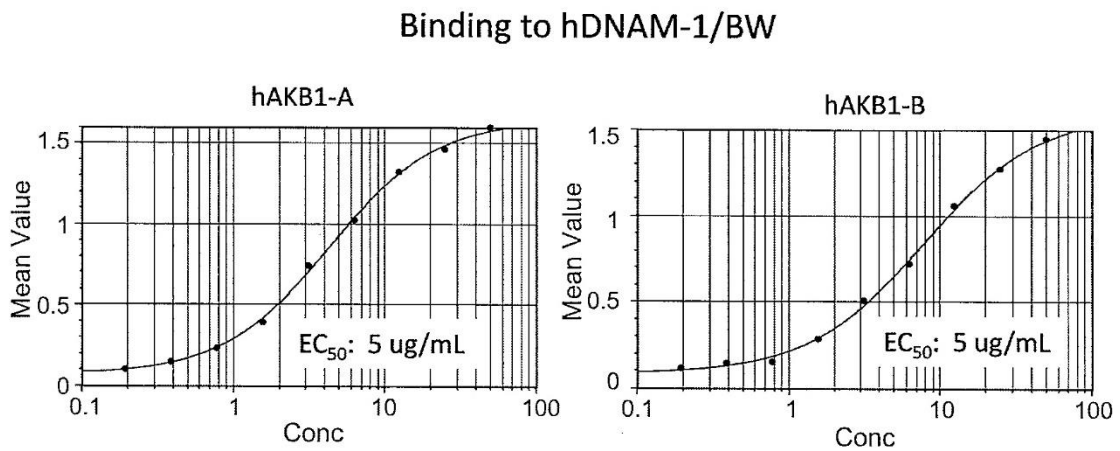
COMPARISON OF LIGHT CHAIN VARIABLE REGIONS

	1	2	3
	123456789	0123456789	0123456789
mAKB1	SIVMTQTPK	FLLVSAGDRV	TITCKASQSV <u>SNDVAWYQQK</u>
hAKB1 VL1	DIQMTQSPS	SLSASVGDRV	TITCKASQSV <u>SNDVAWYQQK</u>
hAKB1 VL2	DIQMTQSPS	SLSASVGDRV	TITCKASQSV <u>SNDVAWYQQK</u>
KU760971 VL	DIQMTQSPS	SLSASVGDRV	TITC----- -WYQQK
	4	5	6
	0123456789	0123456789	0123456789
mAKB1	PGQSPKLLIY	<u>YASNRYTGVP</u>	DRFTGSGYGT DFTFTISTVQ
hAKB1 VL1	PGKAPKLLIY	<u>YASNRYTGVP</u>	SRFSGSGYGT DFTFTISLQ
hAKB1 VL2	PGKAPKLLIY	<u>YASNRYTGVP</u>	SRFSGSGSGT DFTFTISLQ
KU760971 VL	PGKAPKLLIY	-----GVP	SRFSGSGSGT DFTFTISLQ
		1	1
	8	9	0
	0123456789	0123456789	0123456789 0
mAKB1	AEDLAVYFCQ	<u>QDYSSPLTFG</u>	AGTKLELKRT V
hAKB1 VL1	PEDIATYYCQ	<u>QDYSSPLTFG</u>	GGTKVEIKRT V
hAKB1 VL2	PEDIATYYCQ	<u>QDYSSPLTFG</u>	GGTKVEIKRT V
KU760971 VL	PEDIATYYC-	-----FG	GGTKVEIKRT V

[Fig. 4]



[Fig. 5]



[Fig. 6]

BASE SEQUENCE (SEQ ID NO: 19) OF HEAVY CHAIN CODING
REGION OF hAKB1-A

ATGAAAGTGTGAGTCTGTTGACAGCCATTCCTGGTATCCTGTCTCAAGTTCAGCTTCAGG
AGTCAGGACCTGGCCCTCGIGAAACCTTCTGAGACTCTGTCTCTCACCTGCACTGTCAGTGGCTACTCCAT
CACCAGTGGTTATTACTGGAACCTGGATCCGGCAGCCTCCAGGAAAAGGACTGGAATGGAIGGGCTACATC
AGCTACGACGGCAGCAATAACTACAACCCAAGTCTCAAGAATCGAGTCACCATCAGTCGTGACACATCTA
AGAACCAGTTTTTCCCTGAAGTTGAGTTCTGTGACTGCTGCCGACACAGCTGTGTATTACTGTGCAAGGGC
CTACTATGGGAACTATGTGGGCTACTTCGATGTCTGGGGCCAAGGGACCACTGTCACCGTCTCCTCAGCC
TCCACCAAGGGCCCCATCGGTCTTCCCCCTGGCACCCCTCCTCCAAGAGCACCTCTGGGGGCACAGCGGCC
TGGGCTGCCTGGTCAAGSACTACTTCCCCGAACCGGTGACGGTGTTCGTGGAACTCAGGCGCCCTGACCAG
CGGCGTGCACACCTTCCCGGTGTCTTACAGTCCTCAGGACTCTACTCCCTCAGCAGCGTGGTGACCGTG
CCCTCCAGCAGCTTGGGCACCCAGACCTACATCTGCAACGTGAATCACAAGCCCAGCAACACCAAGGTGG
ACAAGAAAGTTGAGCCCAAATCTTGTGACAAAACCTCACACATGCCCACCGTGCCCAGCACCTGAAGCTGC
TGGAGGACCGTCAGTCTTCCTCTTCCCCCAAACCCAAGGACACCCCTCATGATCTCCCGGACCCCTGAG
GTCACATGCGTGGTGGTGGACGTGAGCCACGAAGACCCTGAGGTCAAGTTCAACTGGTACGTGGACGGCG
TGGAGGTGCATAATGCCAAGACAAAGCCGCGGGAGGAGCAGTACAACAGCACGTACCGTGTGGTCAGCGT
CCTCACCGTCCTGCACCAGGACTGGCTGAATGGCAAGGAGTACAAGTGCAAGGTCTCCAACAAAGCCCTC
CCAGCCCCCATCGAGAAAACCATCTCCAAAGCCAAAGGGCAGCCCCGAGAACCACAGGTGTACACCCTGC
CCCCATCCCGGGATGAGCTGACCAAGAACCAGGTGAGCCTGACCTGCCTGGTCAAAGGCTTCTATCCCAG
CGACATCGCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACAACCTACAAGACCACGCCTCCCGTGCTG
GACTCCGACGGCTCCTTCITCCTCTACAGCAAGCTCACCGTGGACAAGAGCAGGTGGCAGCAGGGGAACG
TCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCACTACACGCAGAAGAGCCTCTCCCTGTCTCC
GGGTAAATGA

[Fig. 7]

BASE SEQUENCE (SEQ ID NO: 20) OF HEAVY CHAIN CODING REGION OF hAKB1-B

ATGAAAGTGTGAGTCTGTTGTACCTGTTGACAGCCATTCCTGGTATCCTGTCTCAAGTTCAGCTTCAGG
AGTCAGGACCTGGCCTCGTGAAACCTTCTGAGACTCTGTCTCTCACCTGCACTGTCAAGTGGCTACTCCAT
CAGCAGTGGTTATTACTGGAAGTGGATCCGGCAGCCTCCAGGAAAAGGACTGGAATGGATGGGCTACATC
AGCTACGACGGCAGCAATAACTACAACCCAAGTCTCAAGAATCGAGTCACCATCAGTCGTGACACATCTA
AGAACCAGTTTTCCCTGAAGTTGAGTTCTGTGACTGCTGCCGACACAGCTGTGTATTACTGTGCAAGGGC
CTACTATGGGAAGTATGTGGGCTACTTCGATGTCTGGGGCCAAGGGACCACTGTCAACCGTCTCCTCAGCC
TCCACCAAGGGCCCCATCGGTCTTCCCCCTGGCACCCTCCTCCAAGAGCACCTCTGGGGGCACAGCGGCC
TGGGCTGCCTGGTCAAGGACTACTTCCCGAACCGGTGACGGTGTCTGTGGAAGTCAAGGCGCCCTGACCAG
CGGCGTGCACACCTTCCCGGCTGTCTACAGTCTCAGGACTCTACTCCCTCAGCAGCGTGGTGACCGTG
CCCTCCAGCAGCTTGGGCACCCAGACCTACATCTGCAACGTGAATCACAAGCCAGCAACACCAAGGTGG
ACAAGAAAGTTGAGCCCAAATCTTGTGACAAAACCTACACATGCCACCGTGCCAGCACCTGAAGCTGC
TGGAGGACCGTCAGTCTTCTCTTCCCCCAAAACCAAGGACACCCTCATGATCTCCCGGACCCCTGAG
GTCACATGCGTGGTGGTGGACGTGAGCCACGAAGACCCTGAGGTCAAGTCAACTGGTACGTGGACGGCG
TGGAGGTGCATAATGCCAAGACAAAGCCGCGGGAGGAGCAGTACAACAGCACGTACCGTGTGGTCAGCGT
CCTCACCGTCTGCACCAAGGACTGGCTGAATGGCAAGGAGTACAAGTCAAGGTCTCCAACAAAGCCCCIC
CCAGCCCCCATCGAGAAAACCATCTCCAAGCCAAAGGGCAGCCCCGAGAACACAGGTGTACACCCCTGC
CCCCATCCCGGGATGAGCTGACCAAGAACCAGGTGAGCCTGACCTGCCCTGGTCAAAGGCTTCTATCCCAG
CGACAICGCGGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACAACTACAAGACCACGCTCCCGTGTCTG
GACTCCGACGGCTCCTTCTTCTCTACAGCAAGCTCACCGTGGACAAGAGCAGGTGGCAGCAGGGGAACG
TCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCACTACACGCAGAAGAGCCTCTCCCTGTCTCC
GGGTAAATGA

[Fig. 8]

BASE SEQUENCE (SEQ ID NO: 21) OF LIGHT CHAIN CODING REGION OF hAKB1-A AND hAKB1-B

ATGAAGTCACAGACCCAAGTCTTCTGTGTTTCTGCTGCTCTGTGTGTCTGGAGCTCATGGGGATATTCAGA
TGACCCAGAGTCCCAGCTCCCTGTCTGCATCAGTGGGAGACAGGGTTACCATCACCTGCAAGGCCAGTCA
GAGCGTCTCCAATGATGTGCTTGGTACCAACAGAAGCCAGGGAAGGCTCCTAAACTGCTGATCTACTAT
GCATCCAATCGCTACACTGGAGTCCCTAGTCGCTTCAGTGGCAGTGGATATGGGACCGATTTCACTTTCA
CCATCAGCAGTCTGCAGCCTGAAGACATCGCAACTTATTACTGTGAGCAGGATTATAGCTCTCCACTCAC
TTTCGGAGGAGGGACCAAAGTCGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTCATCTTCCCGCCA
TCTGATGAGCAGTTGAAATCTGGAAGTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCAGAGAGG
CCAAAGTACAGTGAAGGTGGATAACGCCCTCCAATCGGGTAACCCCAGGAGAGTGTACAGAGCAGGA
CAGCAAGGACAGCACCTACAGCCTCAGCAGCACCCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAA
GTCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAAGAGCTTCAACAGGGGAGAGT
GTTAG

[Fig. 9]

AMINO ACID SEQUENCE (SEQ ID NO: 16) OF HEAVY CHAIN OF
hAKB1-A

MKVLSLLYLLTAIPGILS**QVQLQESG**PGLVKPSETLSLTCTVSGYSITSGYYWNWIRQP
PGKGLEWMGYISYDGSNNYNPSL**KNRVTISRDT**SKNQFSLKLSSVTAADTAVYYCARAY
YGNYVG**YFDVWGQ**TTTVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVT
VSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKK
VEPKSCDKTHTCPPCPAPEAAGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEV
KFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPI
EKTISKAKGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNY
KTPPVLDSGDGSFFLYSKLTVDKSRWQQGNVVFSCSVMHEALHNHYTQKSLSLSPGK

AMINO ACID SEQUENCE (SEQ ID NO: 17) OF HEAVY CHAIN OF
hAKB1-B

MKVLSLLYLLTAIPGILS**QVQLQESG**PGLVKPSETLSLTCTVSGYSISSGYYWNWIRQP
PGKGLEWMGYISYDGSNNYNPSL**KNRVTISRDT**SKNQFSLKLSSVTAADTAVYYCARAY
YGNYVG**YFDVWGQ**TTTVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVT
VSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKK
VEPKSCDKTHTCPPCPAPEAAGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEV
KFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPI
EKTISKAKGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNY
KTPPVLDSGDGSFFLYSKLTVDKSRWQQGNVVFSCSVMHEALHNHYTQKSLSLSPGK

AMINO ACID SEQUENCE (SEQ ID NO: 18) OF LIGHT CHAIN OF
hAKB1-A AND hAKB1-B

MKSQTQVFVFLLLCVSGAHG**DIQMTQSPSSLSASV**GDRVITITCKASQSVSN**DV**AWYQOK
PGKAPKLLIYY**ASNRYTGV**PSR**FS**SGSGYGTDF**FT**ISS**LQ**PEDIATYYC**QQDYSS**PLTF
GGG**TKVEIKRTVA**APSVFIFPPSDEQLKSGTASV**VCL**LN**NFY**P**RE**AKVQWKVDNALQSG
NSQESVTEQDSK**ST**YSL**SST**LTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

bold; variable region

white text; signal peptide

underline;CDRs

[Fig. 10]

BASE SEQUENCE (SEQ ID NO: 26) OF HEAVY CHAIN CODING REGION
OF hTKB1

ATGAAACACCTGTGGTTCTTCCTCCTCCTGGTGGCAGCTCCCAGATGGGTCCCTGTCCCAAGTTCAGCTGC
AAGAATCCGGACCCGGACTGGTGAAGCCCTCCGAGACTTTATCTTTAACTTGTACCGTGAGCGGCTACTC
CATCTCCTCCGGCTACTACTGGAACCTGGATTTCGTACAGCTCCCGCAAGGGTTTAGAATGGATGGGCTAC
ATCTCCTACGACGGCTCCAACAACCTACAACCCCTCTTTAAAGAATCGTGTGACCATCTCTCGTGACACCT
CCAAGAACCAGTTCTCTTTAAAGCTGTCTCCGTGACAGCCGCCGATACCGCCGTGTACTACTGCGCTCG
TGCCTACTACGGCAACTACGTGGGCTACTTCGACGTGTGGGGCCAAGGTACCACCGTGACAGTCTCCTCC
GCTAGCACCAAGGGCCCATCGGTCTTCCCCCTGGCACCCCTCCTCCAAGAGCACCTCTGGGGGCACAGCGG
CCCTGGGCTGCCTGGTCAAGGACTACTTCCCGAACC GG TGACGGTGTCTGTGGAACCTCAGGCGCCCTGAC
CAGCGGCGTGCACACCTTCCCGGCCGTCTACAGTCCTCAGGACTCTACTCCCTCAGCAGCGTGGTGACC
GTGCCCTCCAGCAGCTTGGGCACCCAGACCTACATCTGCAACGTGAATCACAAGCCAGCAACACCAAGG
TGGACAAGAAGGTTGAGCCCAAATCTTGTGACAAAACCTCACACATGCCACCGTGCCAGCACCTGAAGC
AGCCGGGGGACCGTCAGTCTTCCTCTTCCCCCAAACCCAAAGGACACCCTCATGATCTCCCGGACCCCT
GAGGTCACATGCGTGGTGGTGGACGTGAGCCACGAAGACCCTGAGGTCAAGTTCAACTGGTACGTGGACG
GCGTGGAGGTGCATAATGCCAAGACAAAGCCGCGGGAGGAGCAGTACAACAGCACGTACCGTGTGGTCAG
CGTCCTCACCGTCTCTGCACCAGGACTGGCTGAATGGCAAGGAGTACAAGTGCAAGGTCTCCAACAAAGCC
CTCCCAGCCCCCATCGAGAAAACCATCTCCAAAGCCAAAGGGCAGCCCCGAGAACCACAGGTGTACACCC
TGCCCCCATCCCGGACGAGCTGACCAAGAACCAGGTGAGCCTGACCTGCCTGGTCAAAGGCTTCTATCC
CAGCGACATCGCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACAACCTACAAGACCACGCCTCCCGIG
CTGGACTCCGACGGCTCCTTCTTCTCTACAGCAAGCTCACCGTGGACAAGAGCAGGTGGCAGCAGGGGA
ACGTCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCACTACACGCAGAAGAGCCTCTCCCTGIC
TCCGGGTAAATGATGA

bold; variable region

white text; signal peptide

[Fig. 11]

BASE SEQUENCE (SEQ ID NO: 27) OF LIGHT CHAIN CODING REGION OF hTKB1

ATGGACATGAGGGTCCCGCTCAGCTCCTGGGGCTCCTGCTACTCTGGCTCCGAGGTGCCAGATGTGACA
TCCAGATGACCCAGTCCCTTCTCTTTAAGCGCTTCCGTGGGCGATCGTGTGACCATCACTTGTAAGGC
CTCCCAGTCCGTGTCCAACGACGTGGCTTGGTACCAGCAGAAGCCCGCAAGGCCCCCAAGCTGCTGATC
TACTACGCCTCCAATCGTTACACCGGCGTGCCTTCTCGTTTTTCCGGCTCCGGCTACGGCACCGACTTCA
CCTTACCATCTCCTCTTTACAGCCCGAGGACATCGCCACCTACTACTGCCAGCAAGATTACTCCTCCCC
TCTGACCTTTGGCGGCGGCACCAAGGTGGAGATCAAGCGTACGGIGGCTGCACCATCIGTCTTCATCTTC
 CCGCCATCTGATGAGCAGTTGAAATCTGGAAGTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
 GAGAGGCCAAAGTACASTGGAAGGTGGATAACGCCCTCCAATCGGGTAACTCCCAGGAGAGTGTACAGA
 GCAGGACAGCAAGGACAGCACCTACAGCCTCAGCAGCACCTGACGCTGAGCAAAGCAGACTACGAGAAA
 CACAAAGTCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAAGAGCTTCAACAGGG
 GAGAGTGTGATGA

bold; variable region

white text; signal peptide

[Fig. 12]

AMINO ACID SEQUENCE (SEQ ID NO: 24) OF HEAVY CHAIN OF hTKB1

MKHLWFFLLLVAAAPRWVLS**QVQLQESGPGLVKPSSETLSLTCTVSGYSISSGYYWNWIRQ**
PPGKGLEWMGYISYDGSNNYNPSLKNRVTISRDTSKNQFSLKLSSVTAADTAVYYCARA
YYGNYVGYFDVWGQGTTVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPV
 TVSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVPSSSLGTQTYICNVNHKPSNTKVDK
 KVEPKSCDKTHTCPPCPAPEAAGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPE
 VKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAP
 IEKTISKAKGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENN
 YKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFSQSVMEALHNHYTQKSLSLSPGK

AMINO ACID SEQUENCE (SEQ ID NO: 25) OF LIGHT CHAIN OF hTKB1

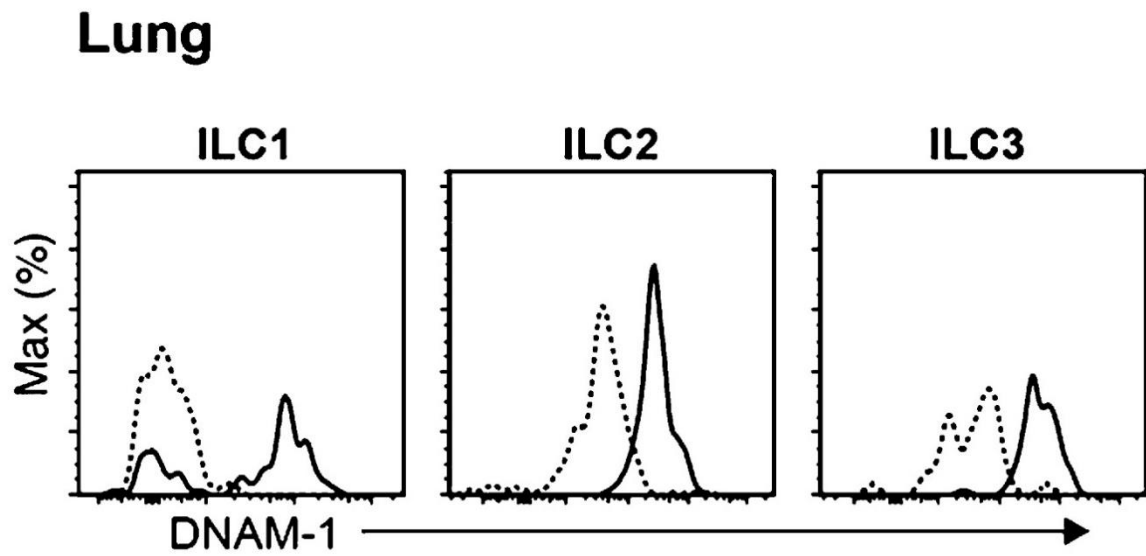
MDMRVPAQLLGLLLWLRLRGARCD**IQMTQSPSSLSASVGDRVTITCKASQSVSNDVAWYQ**
QKPGKAPKLLIYYASNRYTGVP**SRFSGSGYGTDFFTIS****SLQPED****IATYYCQDYSSPL**
TFGGGT**KVEIKRTVA**APSVFIFPPSDEQLKSGTASVCLLNRFYPREAKVQWKVDNALQ
 SGNSQESVTEQDSKDYSLSTLTLSKADYEKHKVYACEVTHQGLSPVTKSFNRGEC

bold; variable region

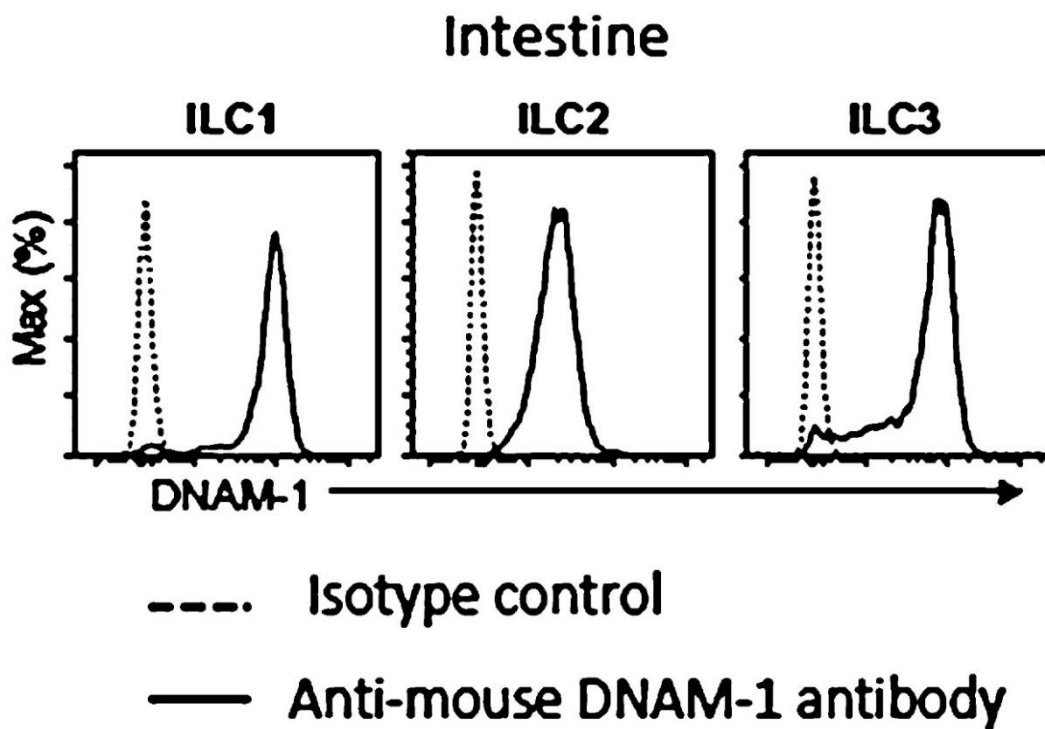
white text; signal peptide

underline;CDRs

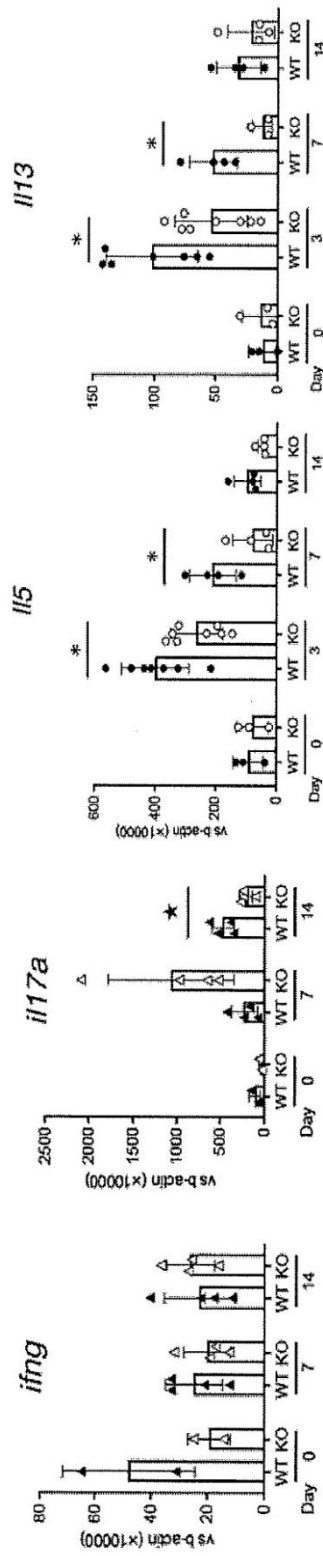
[Fig. 13A]



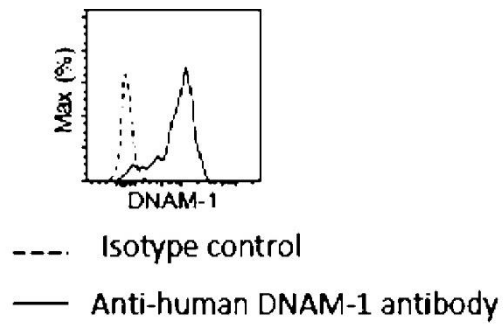
[Fig. 13B]



[Fig. 14]



[Fig. 15]



[Fig. 16]

