

hKLK5	1	I I N G S D C D M H T Q P W Q A A L L R P N Q - L Y C G A V L V H P Q M L L T A A H C R K K V F R V R L G H Y S L S P	59
hKLK7	1	I I D G A P C A R G S H P W Q V A L L - S G N Q - L H C G G V L V N E R M V L T A A H C K M N E Y T V H L G S D T L G -	57
hKLK14	1	I I G G H T C T R S S Q P W Q A A L L A G P R R R F L C G G A L S G Q M V I T A A H C G R P I L Q V A L G K H N L R -	59
hKLK5	60	V Y E S G Q Q M F Q G V K S I P H P G Y S H P G H S N D L M L I K L N R R I R P T K D V R P I N V S S H C P S A G T K C	119
hKLK7	58	- - D R R A Q Q R I K A S K S F R H P G Y S T Q T H V N D L M L V K L N S Q A R L S S M V K K V R L P S R C E P P G T T C	115
hKLK14	60	R W E A T Q Q V L R V V R Q V T H P N Y N S R T H D N D L M L L Q L Q Q P A R I G R A V R P I E V T Q A C A S P G T S C	119
hKLK5	120	L V S G W G T T K S P Q V H F P K V L Q C L N I S V L S Q K R C E D A Y P R Q I D D T M F C A G D K A G R - D S C Q G D	178
hKLK7	116	T V S G W G T T T S P D V T F P S D L M C V D V K L I S P Q D C T K V Y K D L L E N S M L C A G I P D S K K N A C N G D	175
hKLK14	120	R V S G W G T I S S P I A R Y P A S L Q C V N I N I S P D E V C Q K A Y P R T I T P G M V C A G V P Q G G K D S C Q G D	179
hKLK5	179	S G G P V V C N G S L Q G L V S W G D Y P C A R P N R P G V Y T N L C K F T K M I Q E T I Q A N S	227
hKLK7	176	S G G P L V C R G T L Q G L V S W G T F P C G Q P N D P G V Y T Q V C K F T K M I N D T M K K H R	224
hKLK14	180	S G G P L V C R G Q L Q G L V S W G M E R C A L P G Y P G V Y T N L C K Y R S W I E E T M R D K -	227

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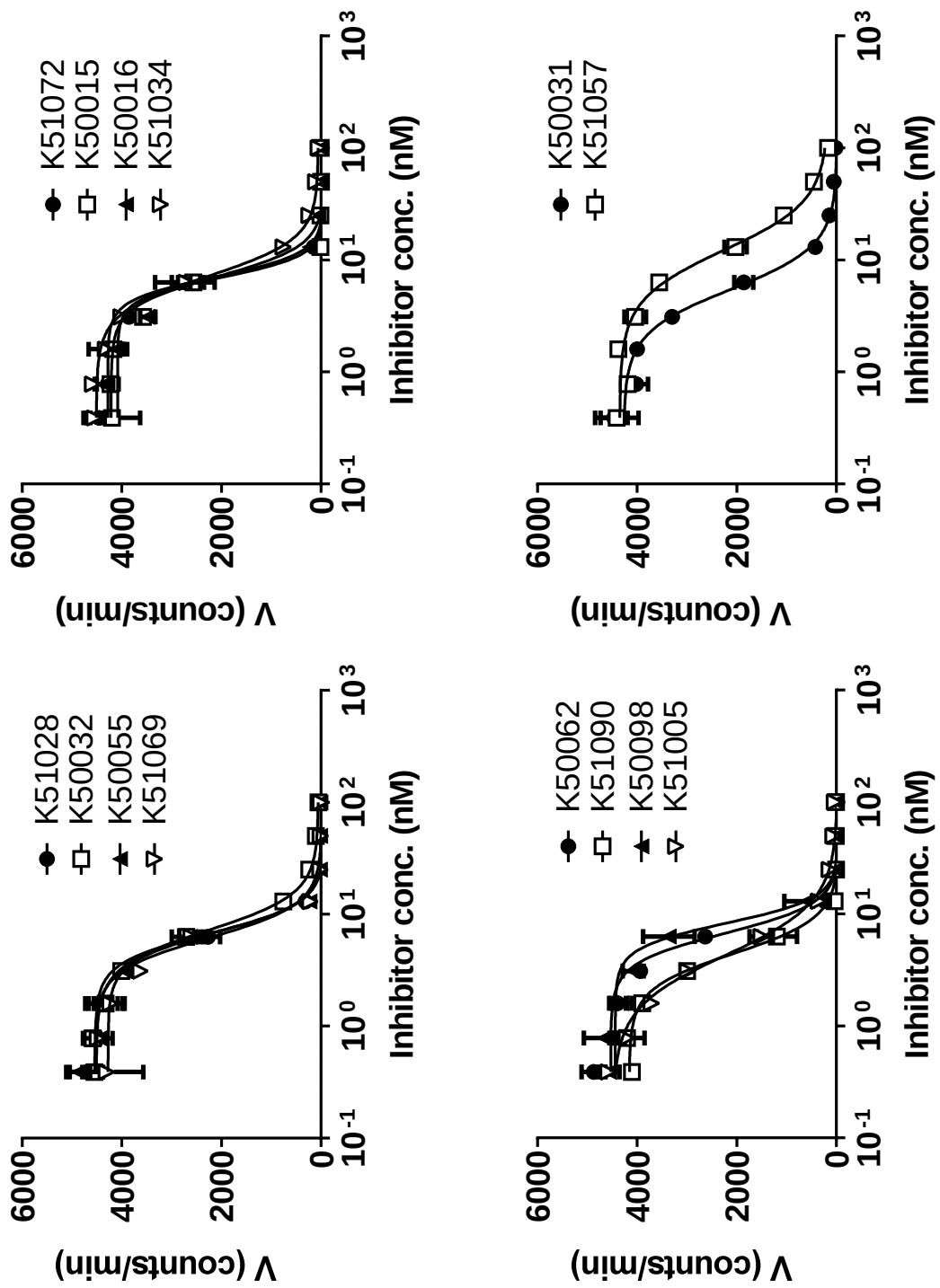


Fig. 2

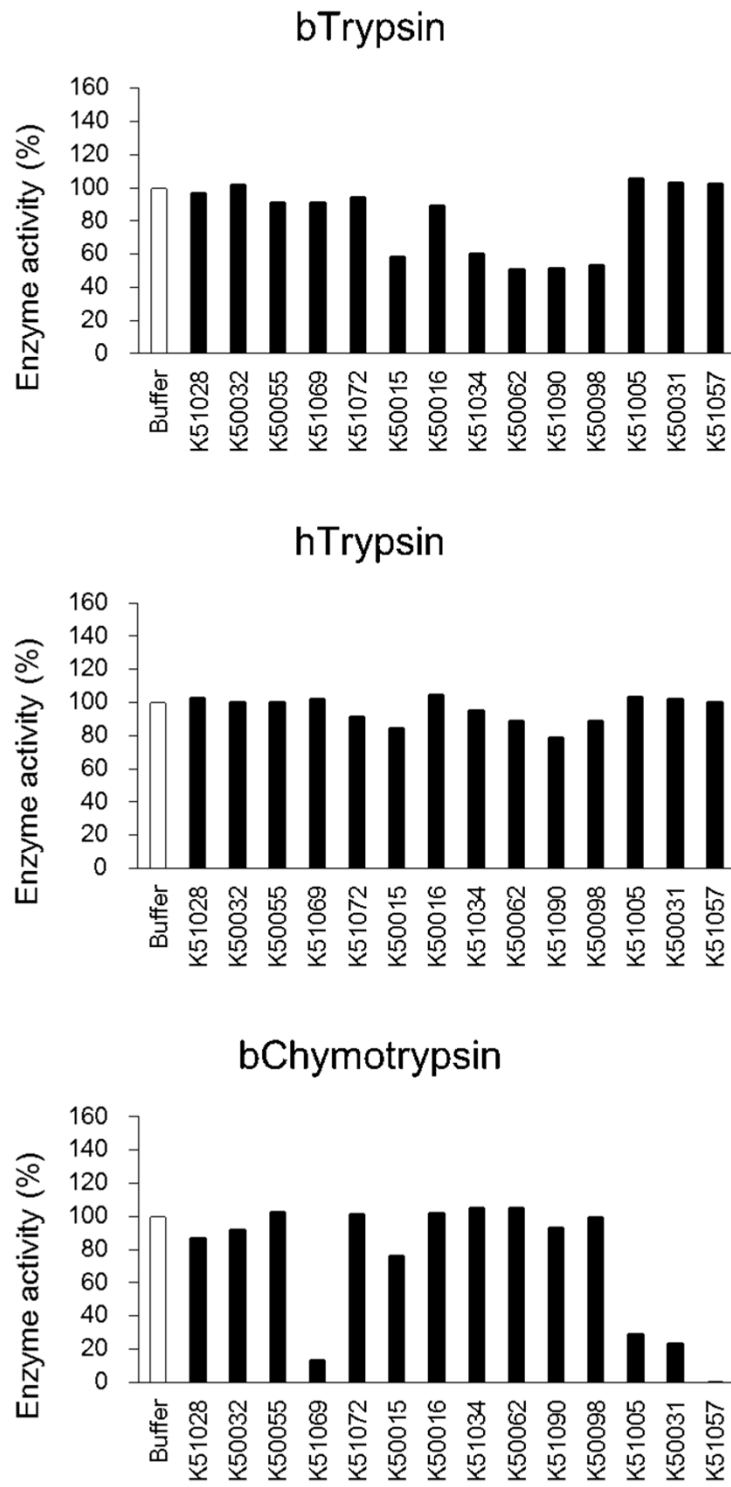


Fig. 3 (A)

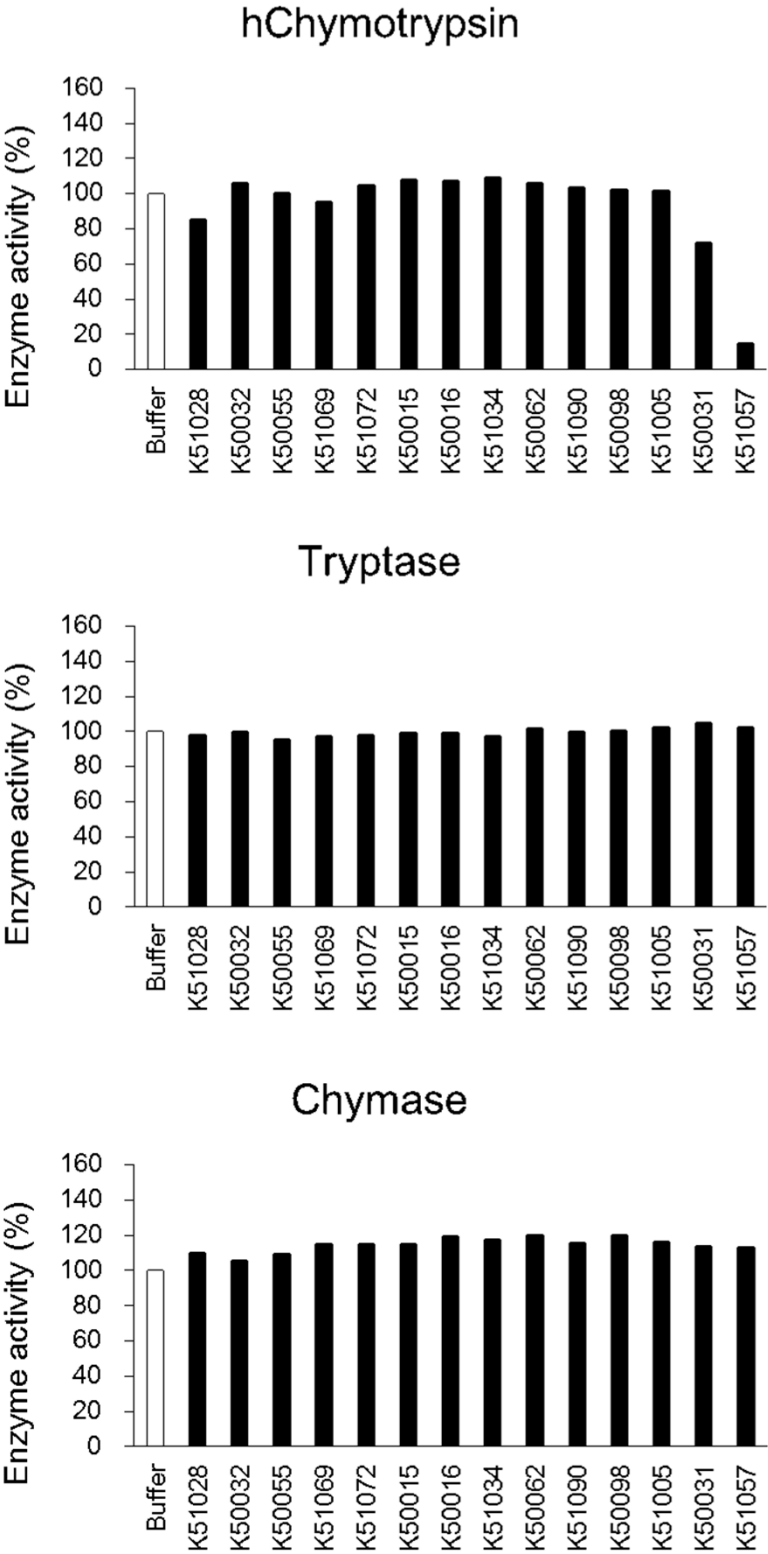


Fig. 3 (B)

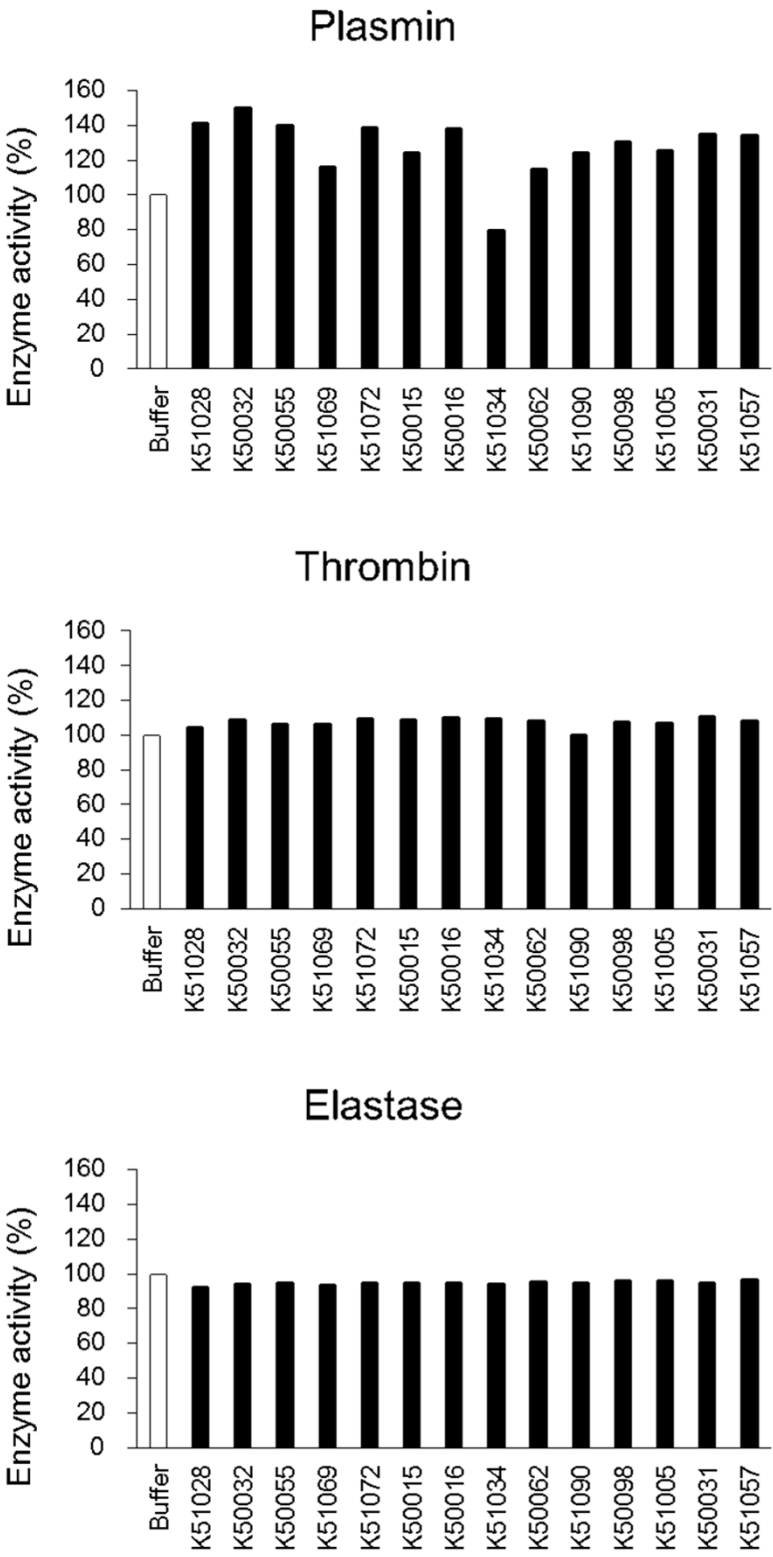


Fig. 3 (C)

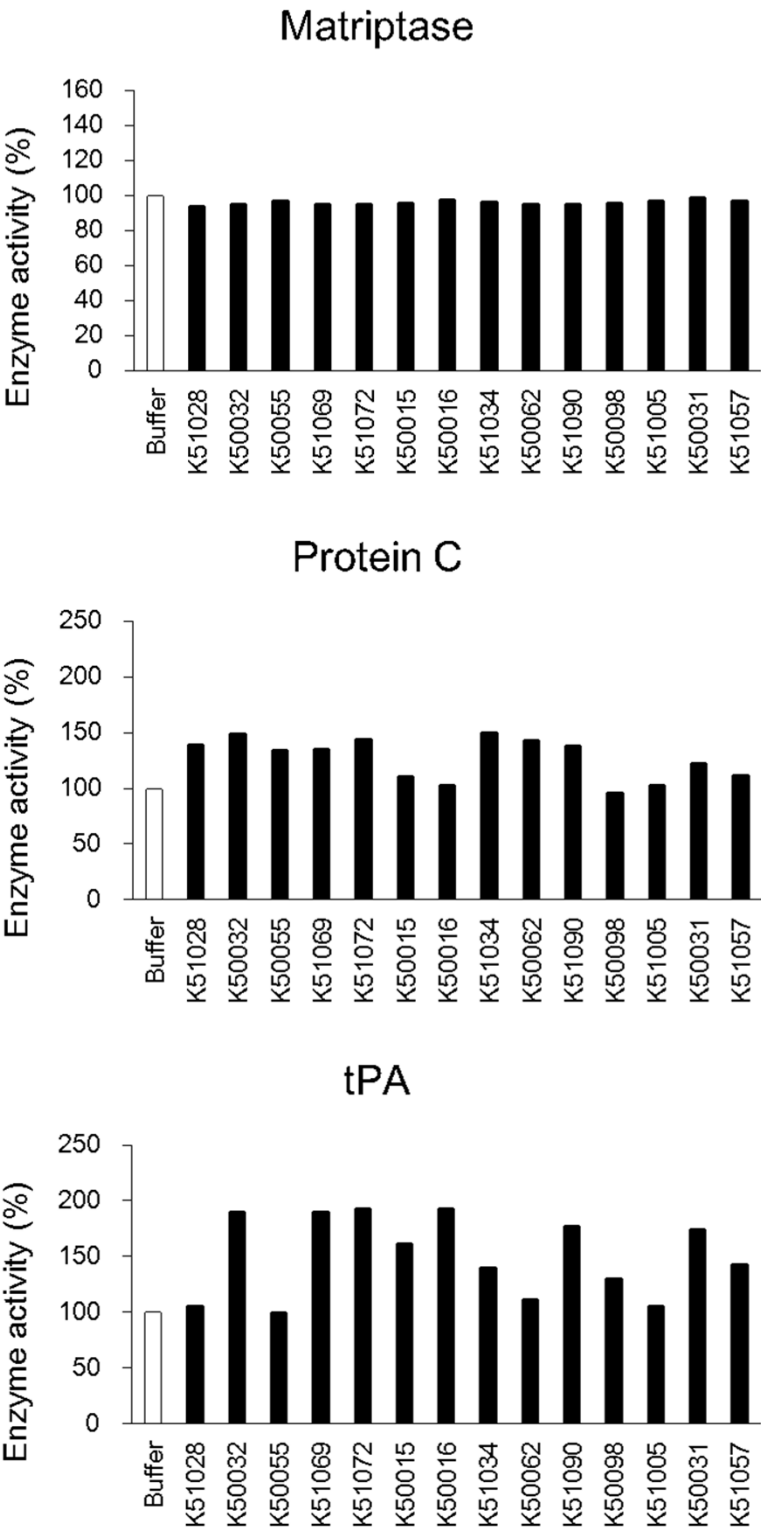


Fig. 3 (D)

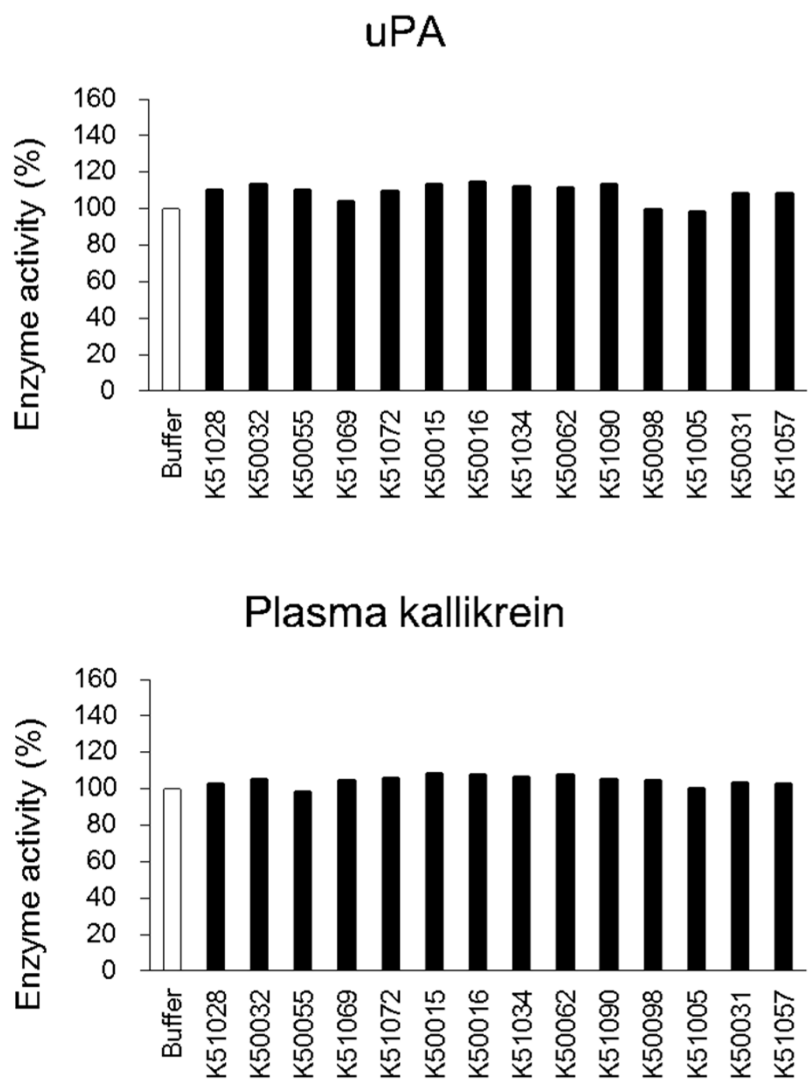


Fig. 3 (E)

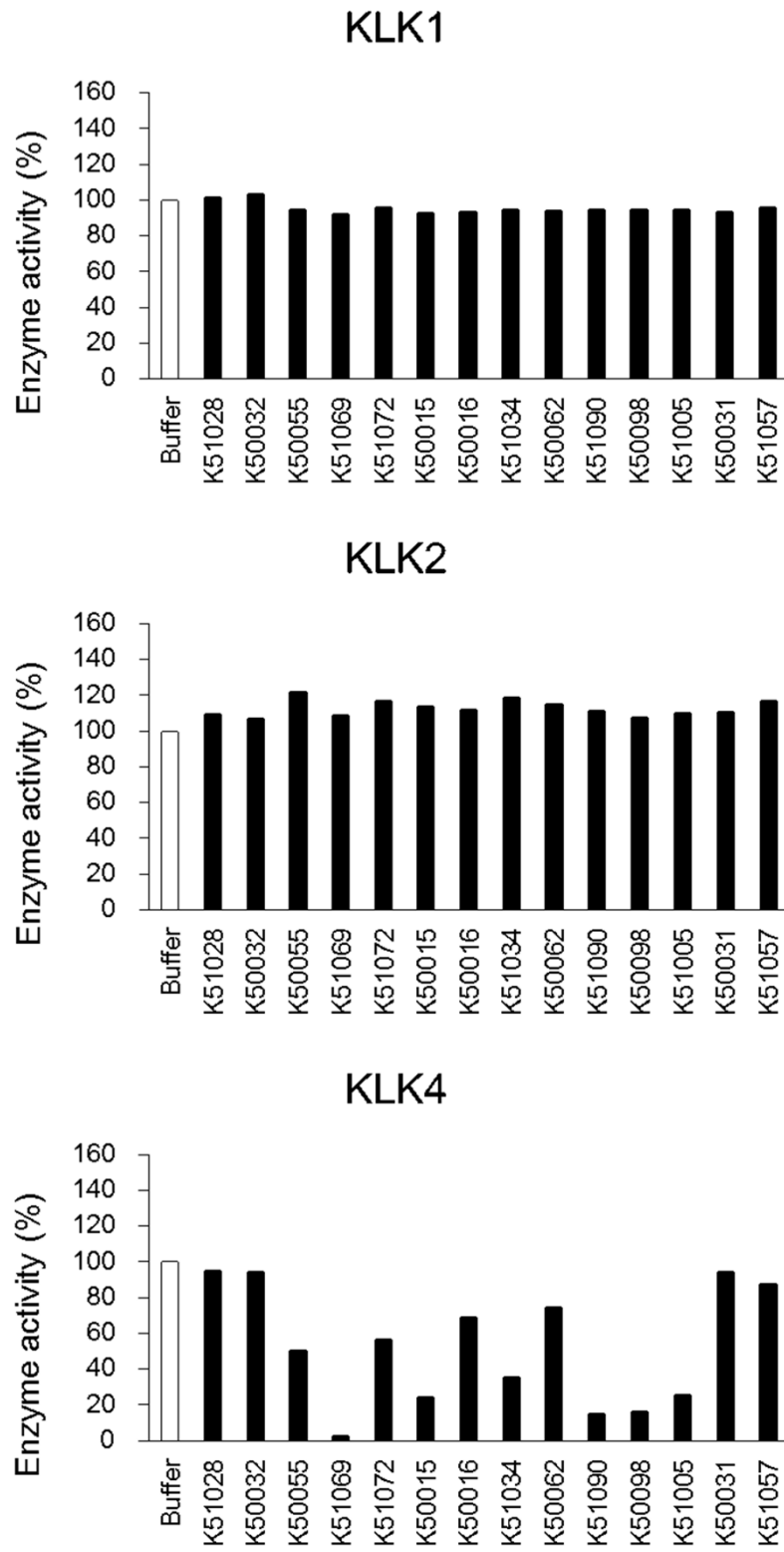


Fig. 3 (F)

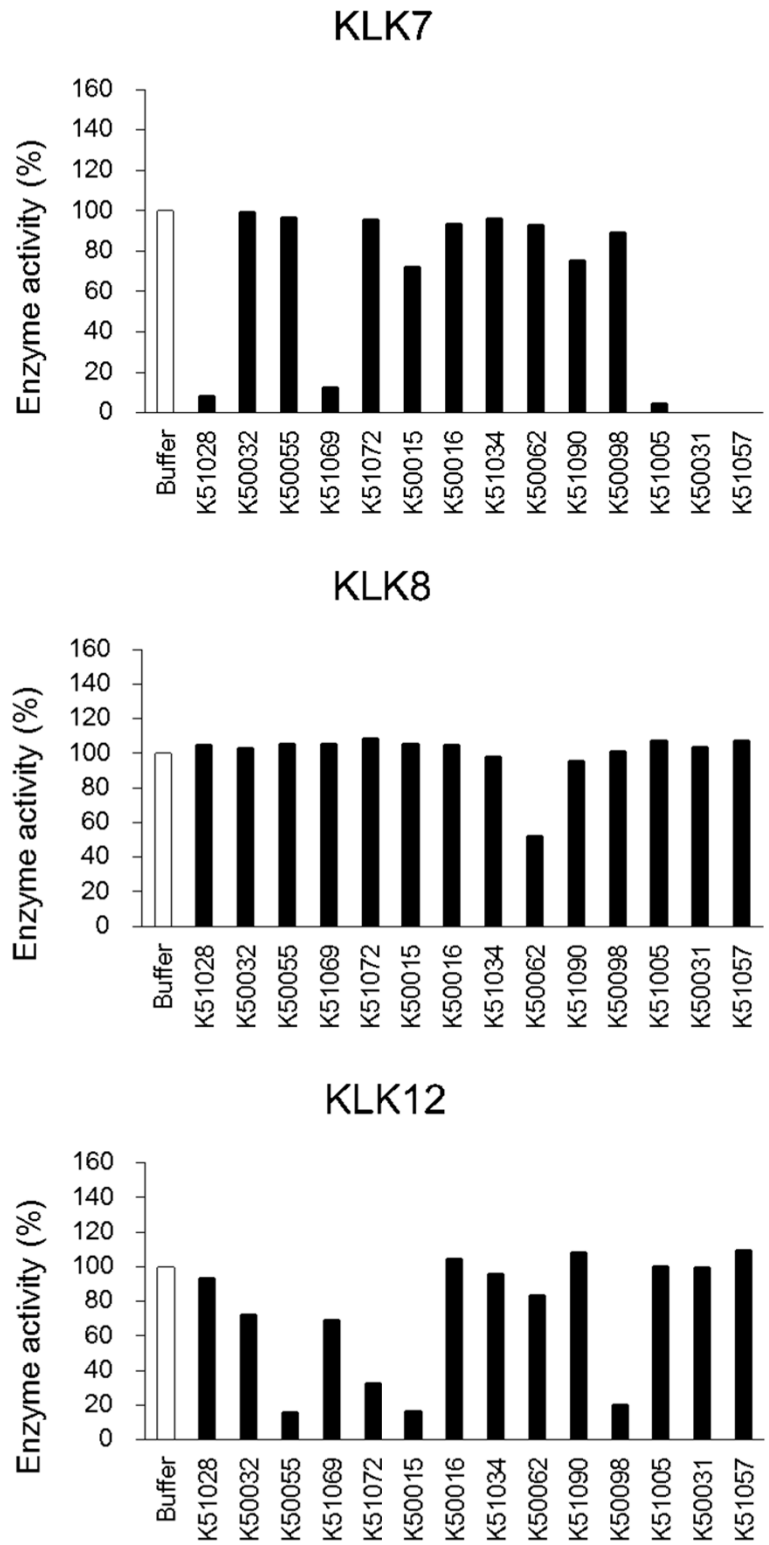


Fig. 3 (G)

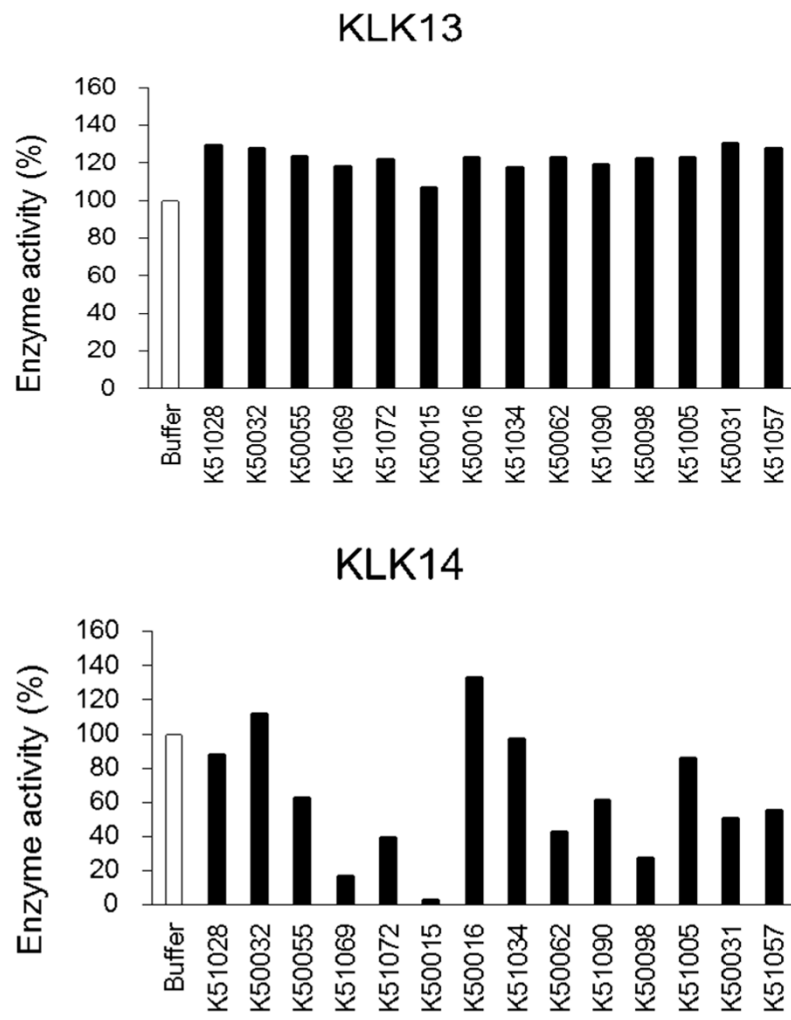


Fig. 3 (H)

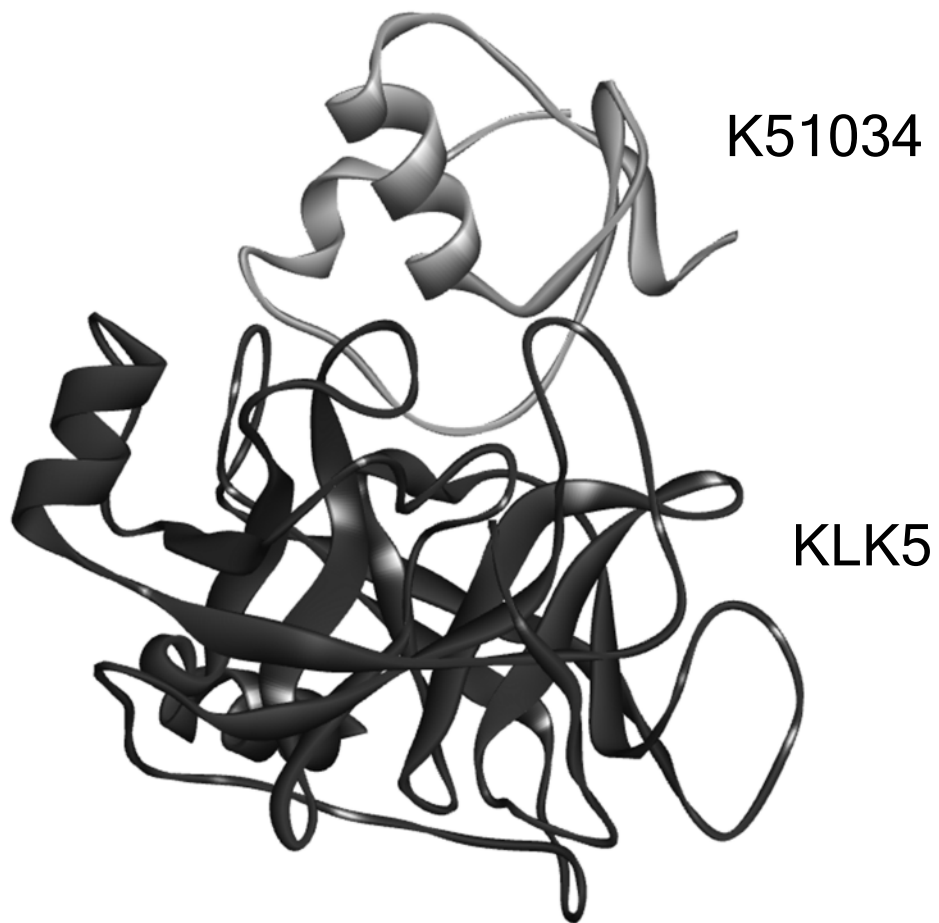


Fig. 4

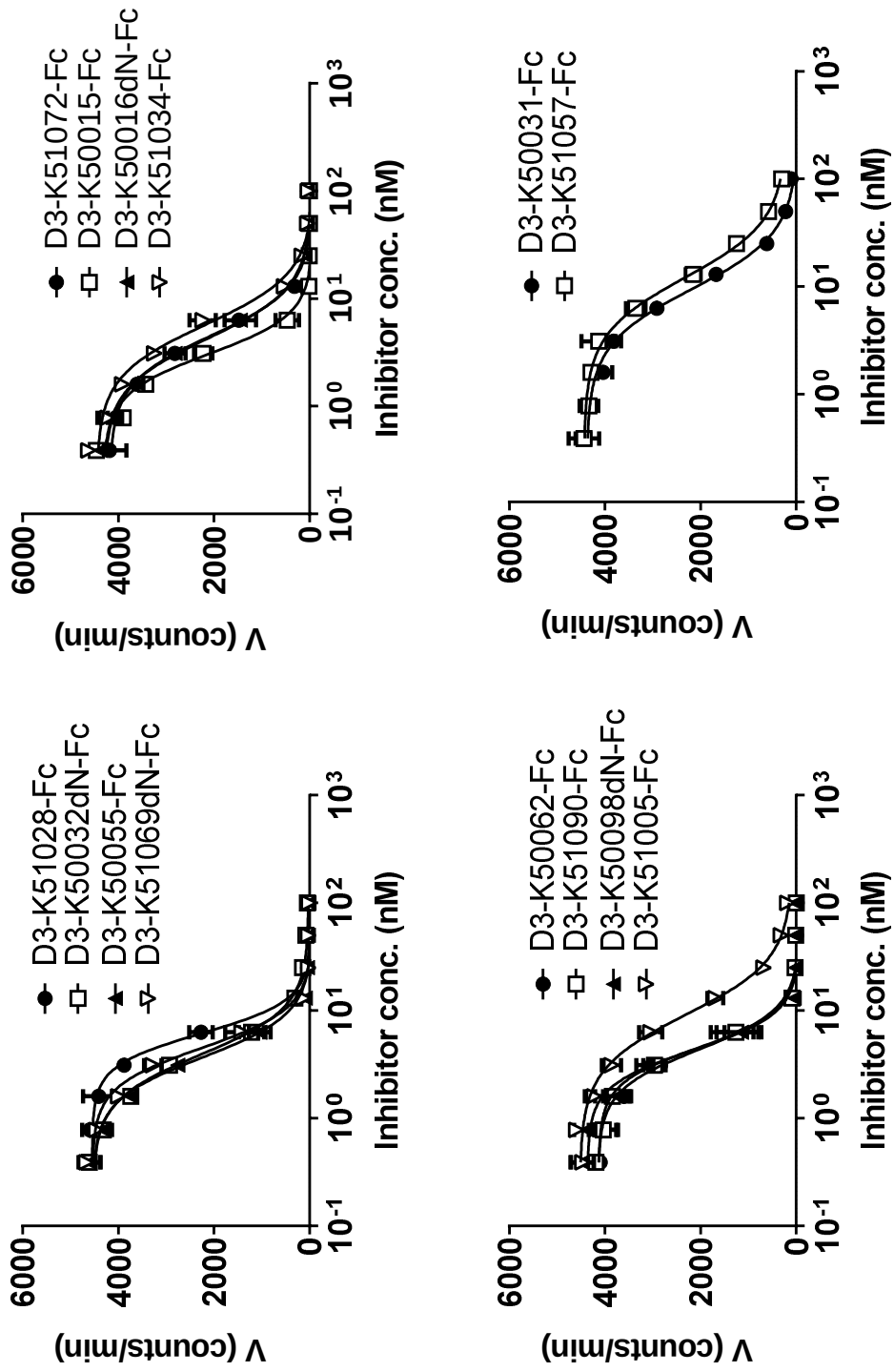


Fig. 5

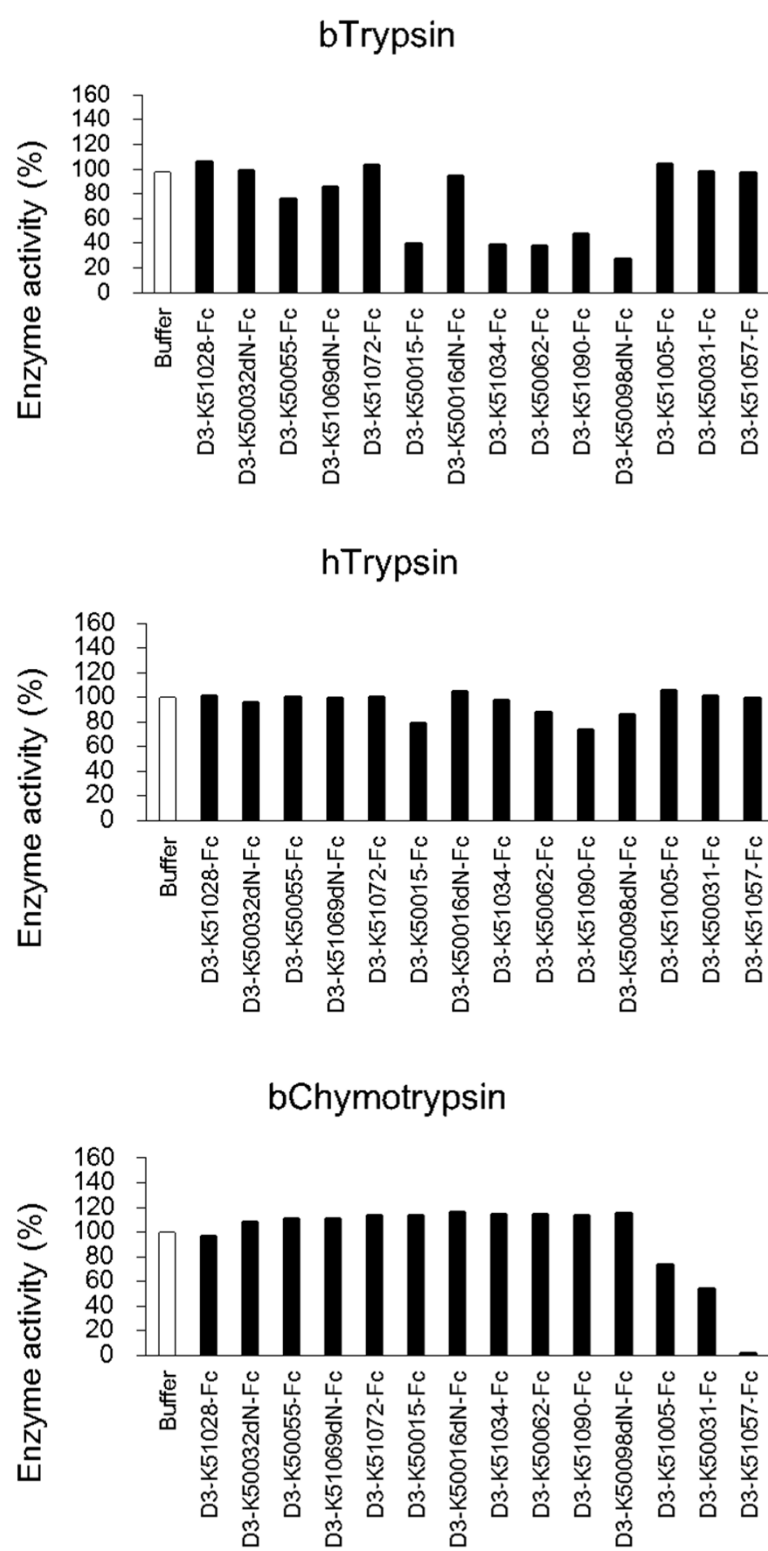


Fig. 6 (A)

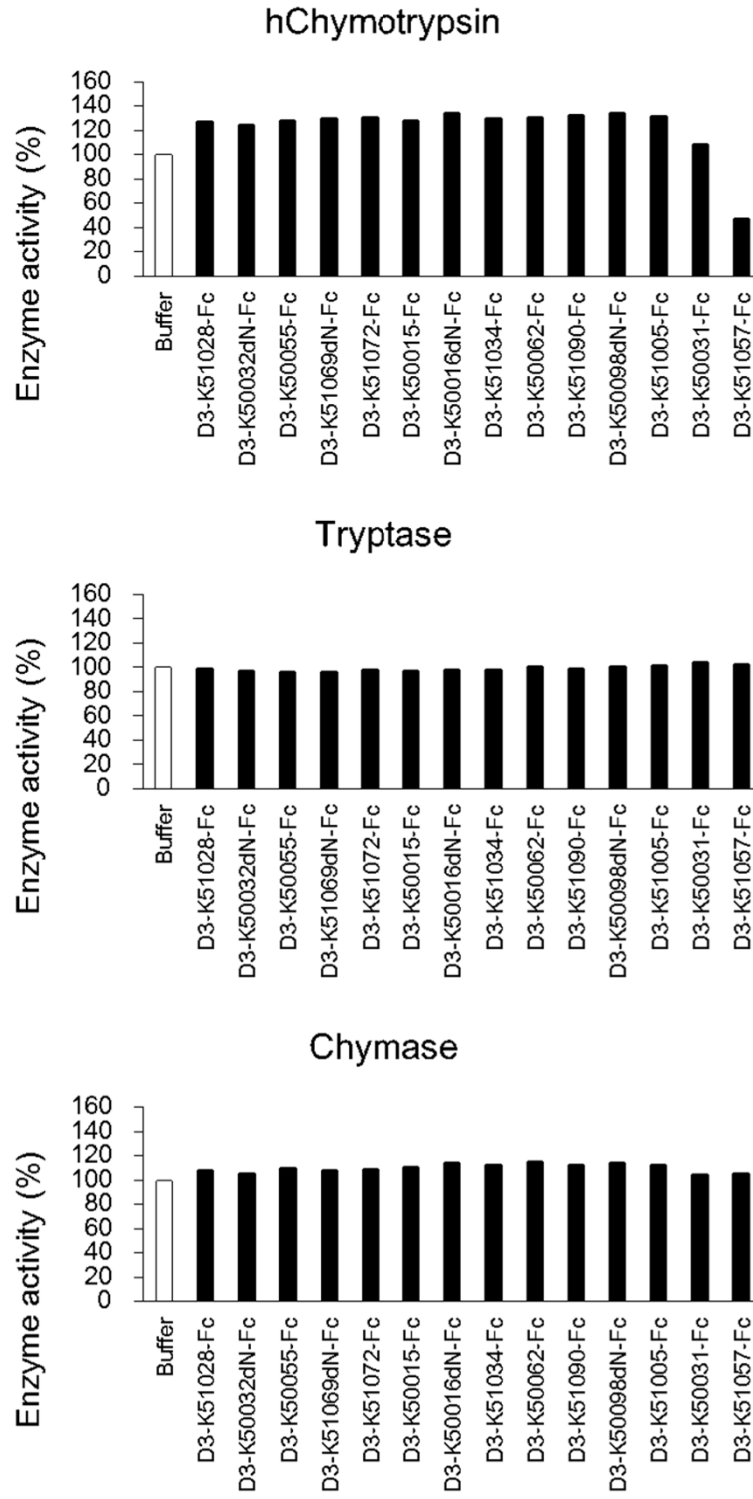


Fig. 6 (B)

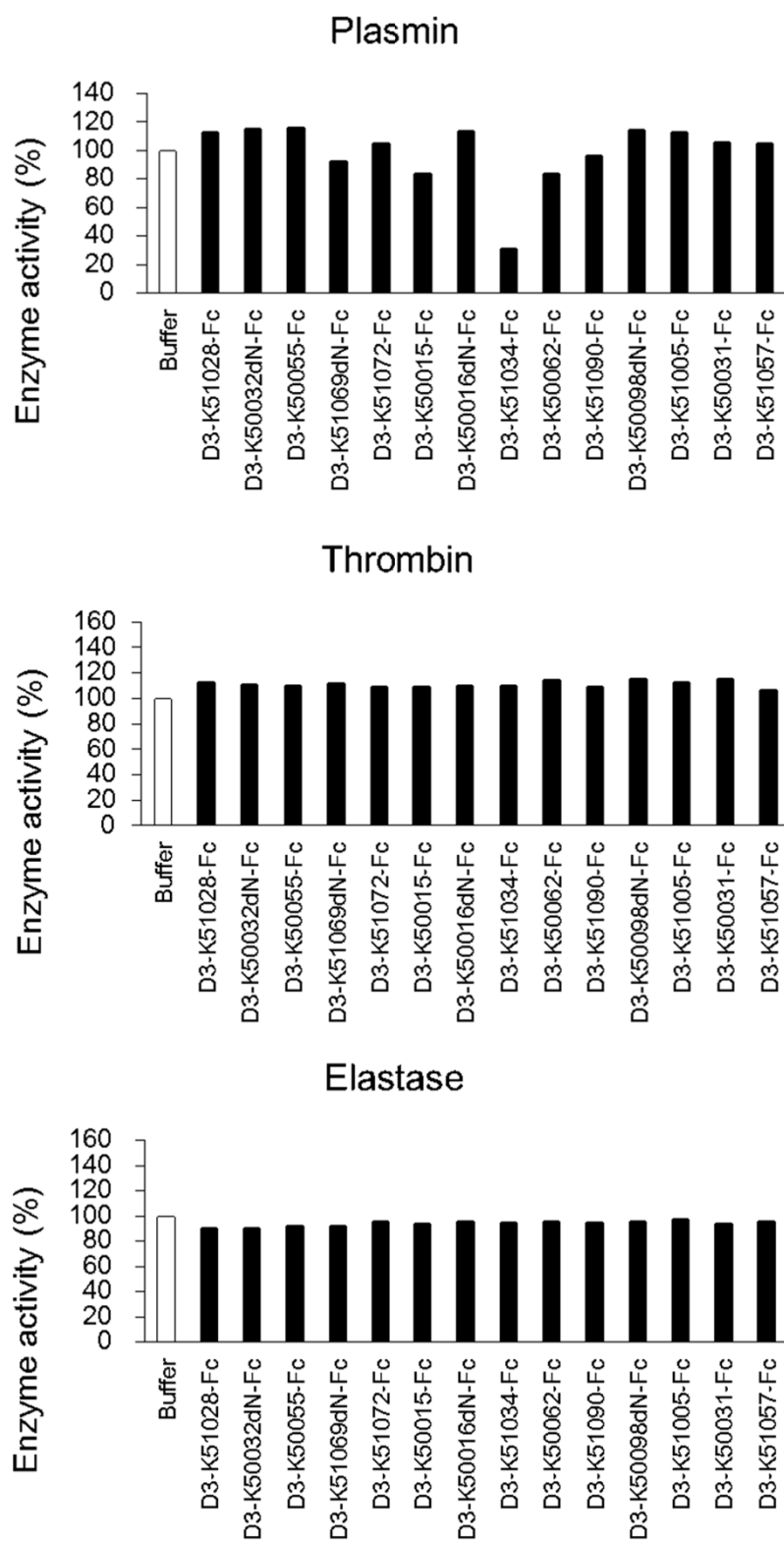


Fig. 6 (C)

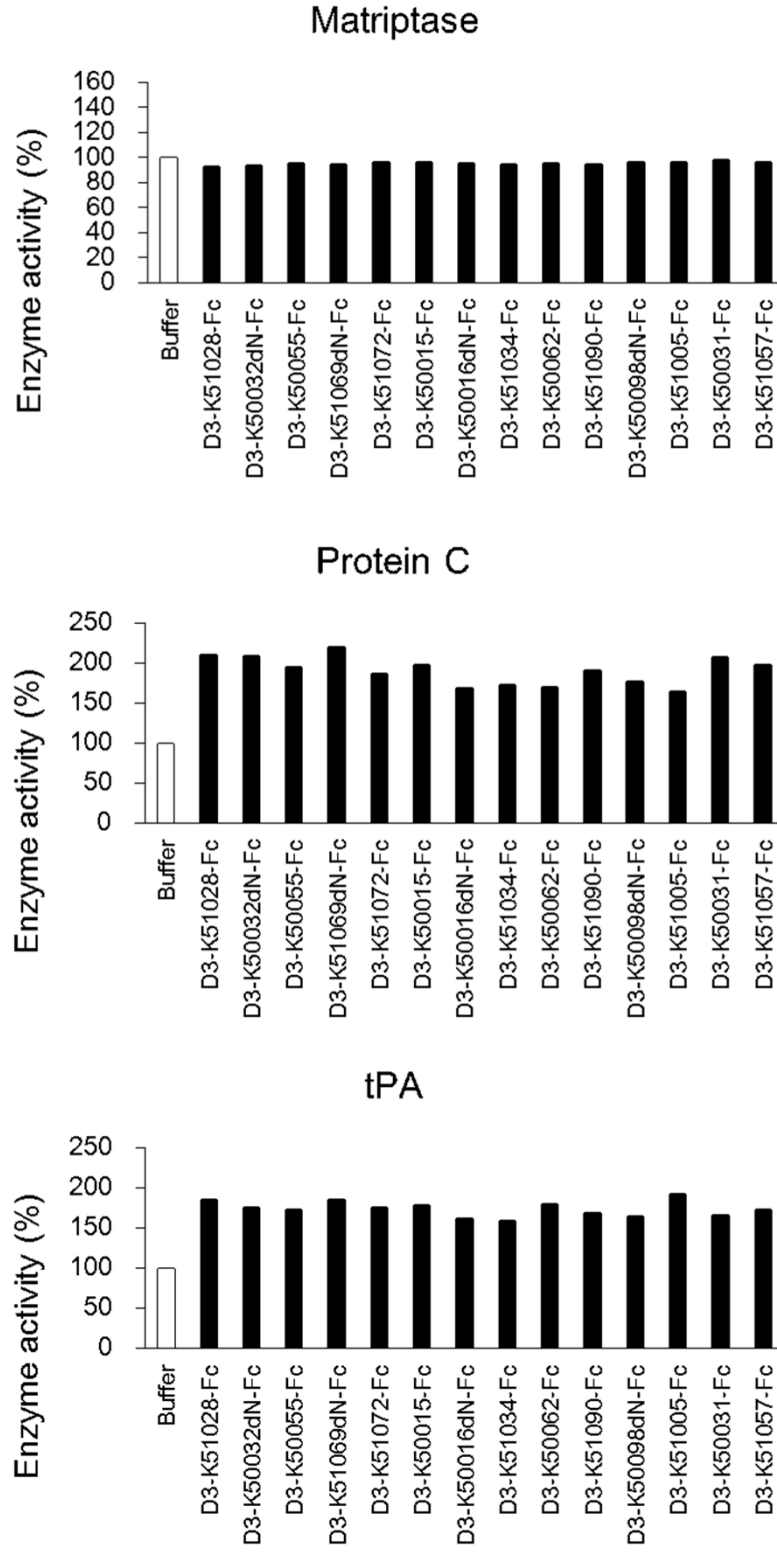


Fig. 6 (D)

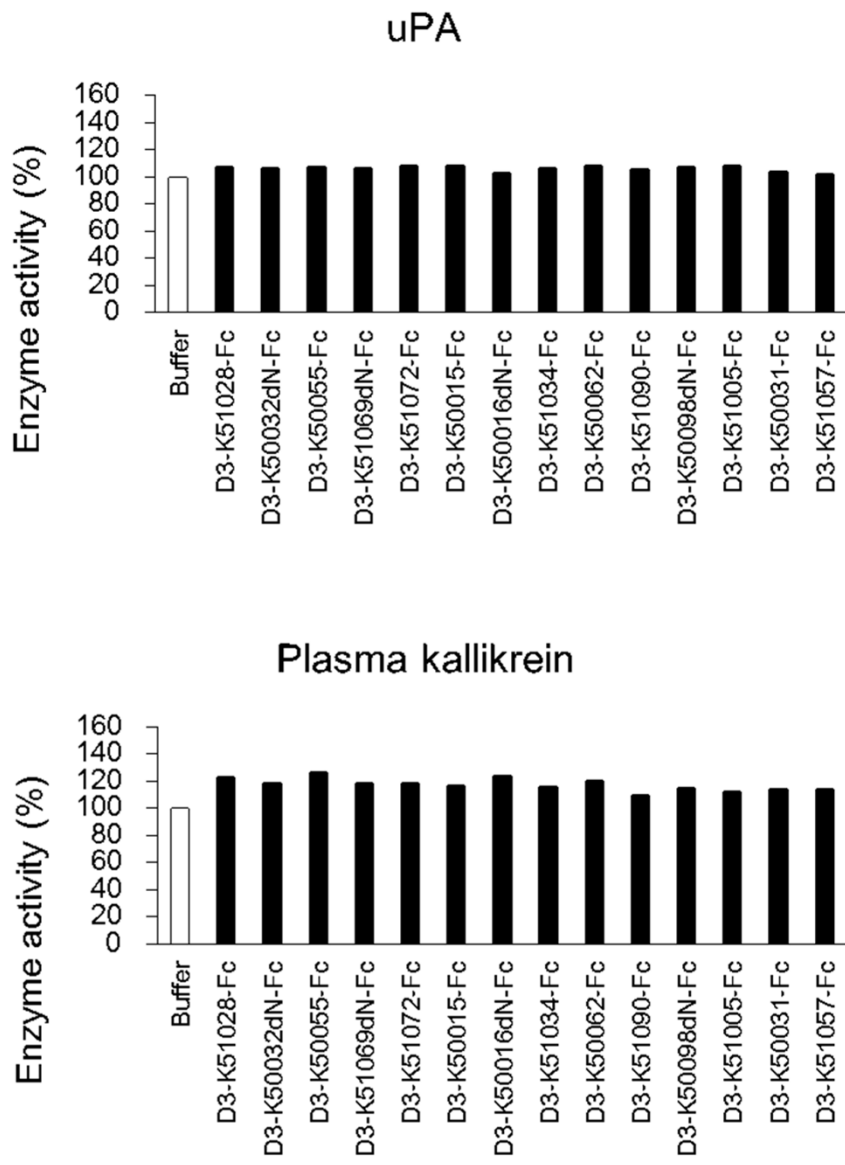


Fig. 6 (E)

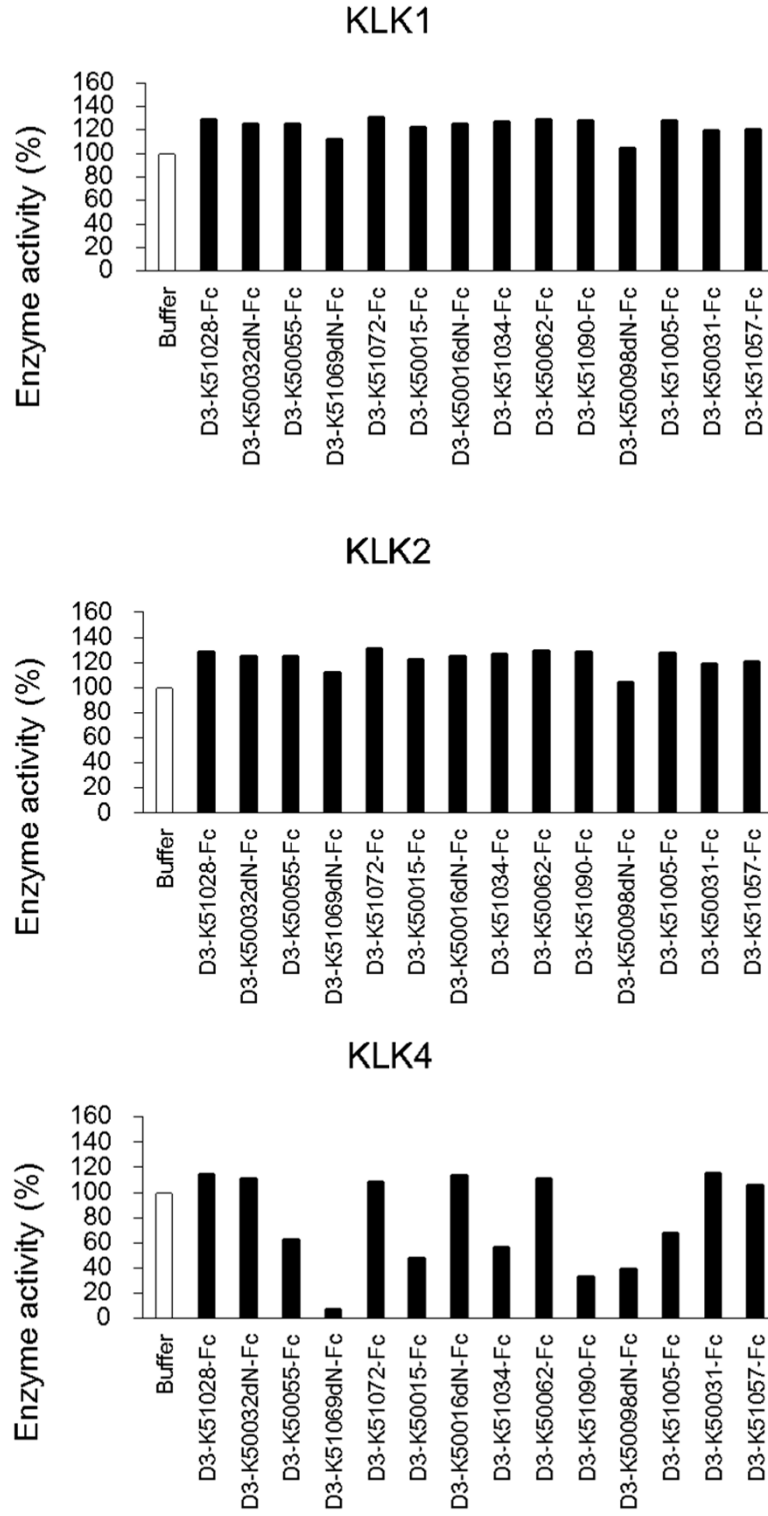


Fig. 6 (F)

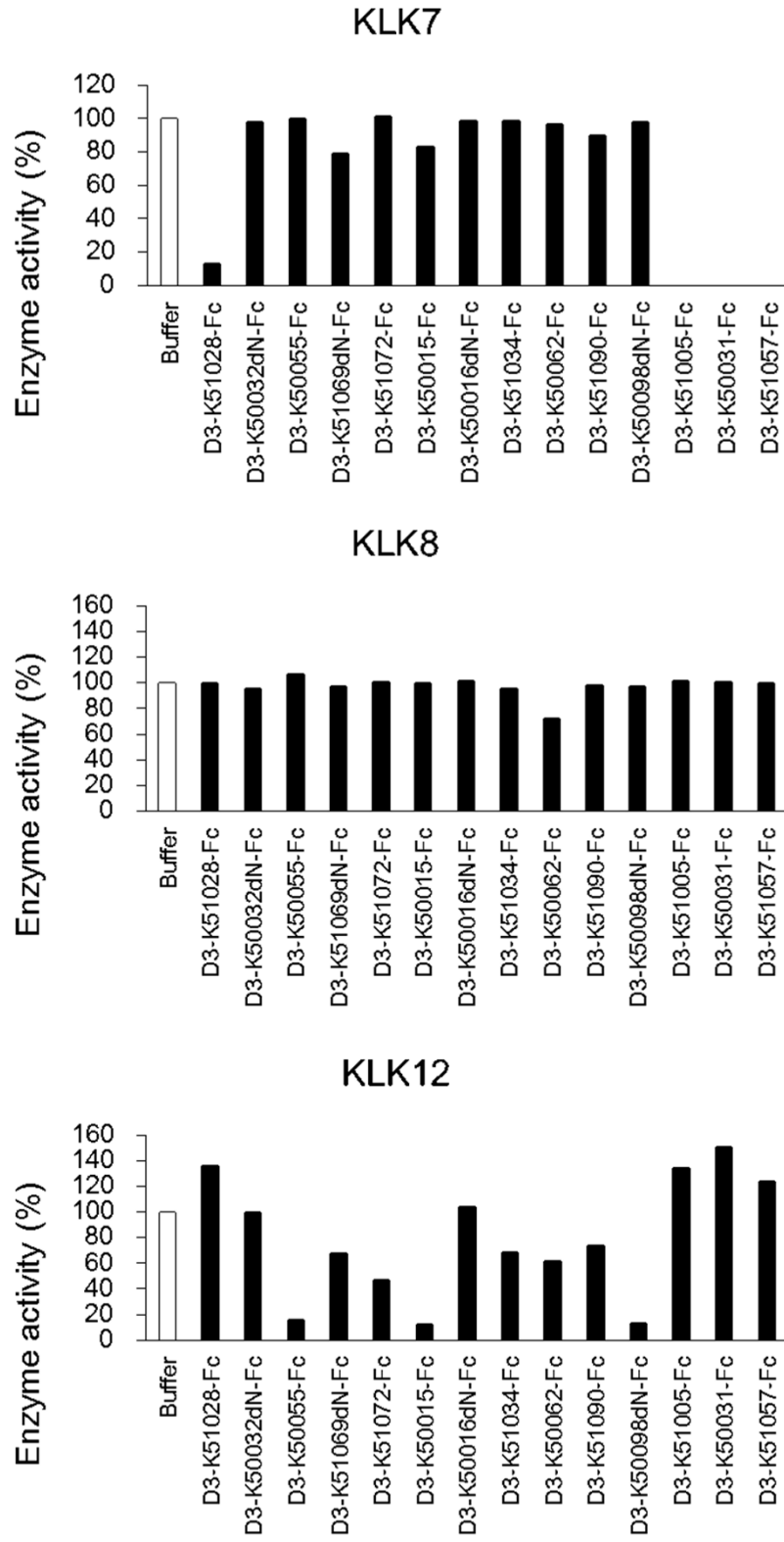


Fig. 6 (G)

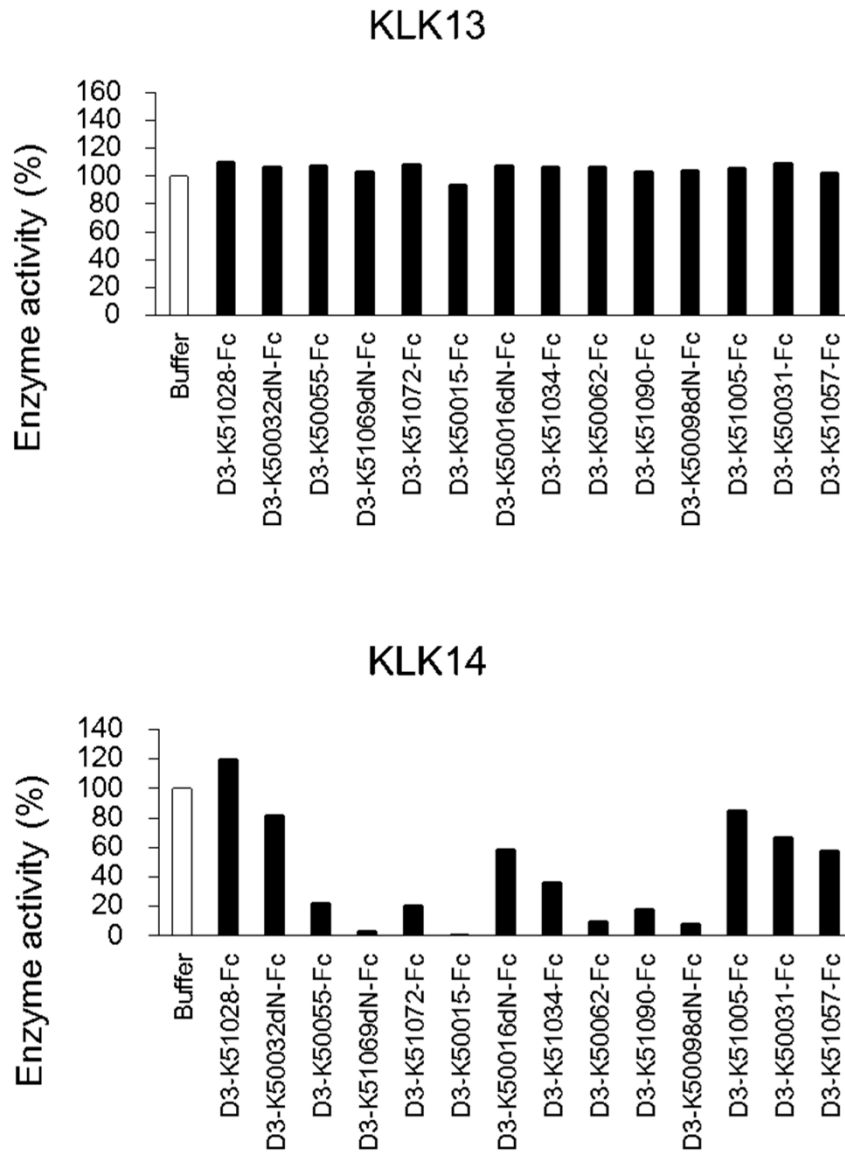


Fig. 6 (H)

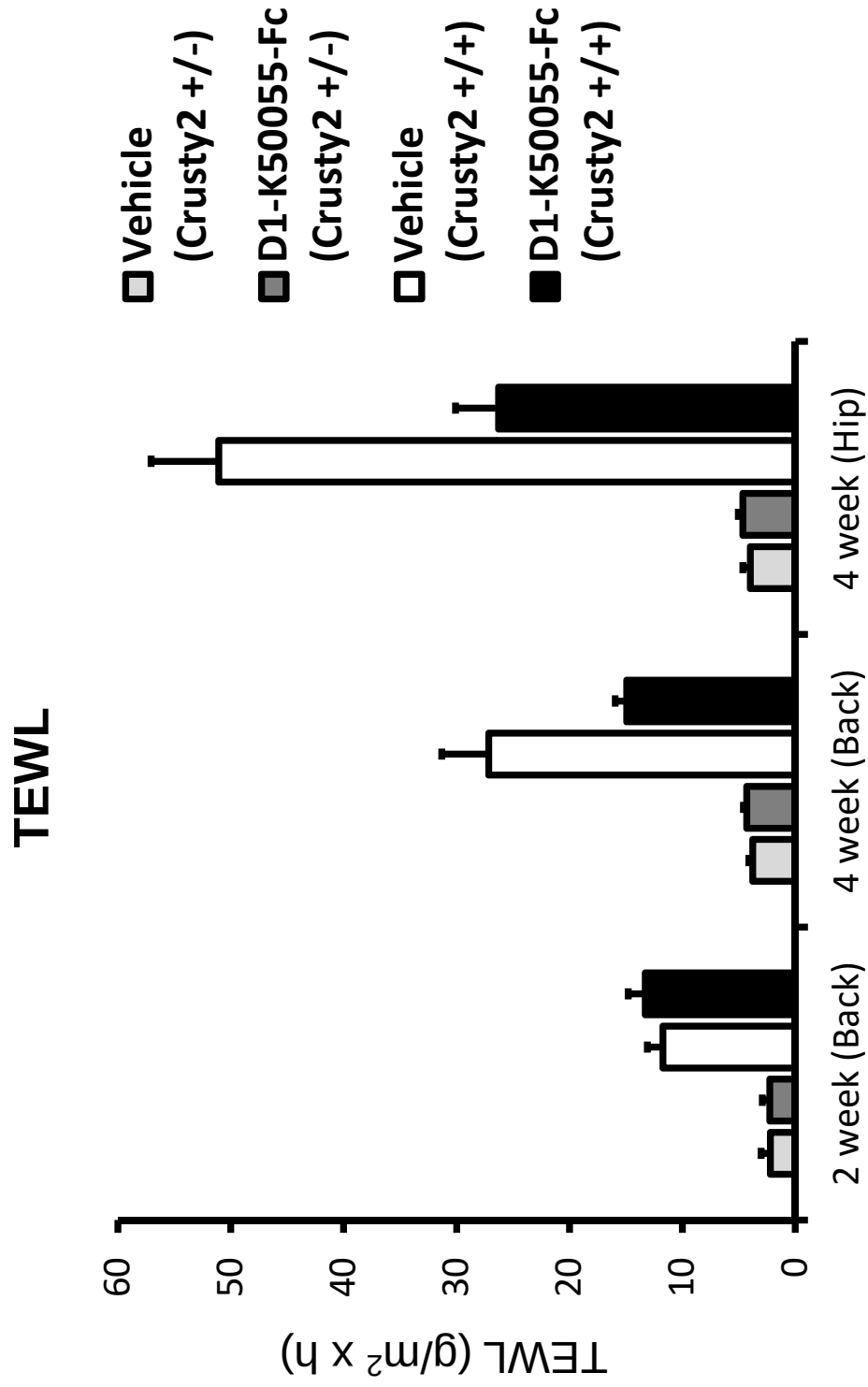


Fig. 7

human SPINK2	1	PQFGLFSKYRTP-N	CSQYR--LPG----	CPRHFN	PVCGSD	MSTYAN	ECTL	CMKIREGGHN	53
hSP5 D8_E490-G551	1	-----EAAKEI--	CSEFRDQVRNGTLI	CTREHN	PVRGPD	GKMHGN	KCAM	CASVFKLEEE	52
hSP5 D9_E561-K622	1	-----EAVQEL--	CSEYRHYVRNGRLP	CTREND	PIEGLD	GKIHGNT	CSMCEAFFQ	QAEAK	52
hSPINK9	1	--IECAKQTKQMVD	CSHYKKLPPGQQRFC	HHMYD	PICGSD	GKTYKND	CGFF	CSKVKKTDGT	58
human SPINK2	54	I	KIIRNGPC-						62
hSP5 D8_E490-G551	53	E	KKNDKEEKG						62
hSP5 D9_E561-K622	53	E	KERAEPRAK						62
hSPINK9	59	L	KFVHFGKC-						67

Fig. 8

[Fig. 9]

Amino acid sequence of human SPINK2

DPQFGLFSKYRTPNCSQYRLPGCPRHFNPVCGSDMSTYANECTLCMKIRE
GGHNIKIIRNGPC (SEQ ID NO: 1)

[Fig. 10]

Amino acid sequence of human KLK5

IINGSDCDMHTQPWQAALLLRPNQLYCGAVLVHPQWLLTAAHCRKKVFRV
RLGHYSLSPVYESGQQMFQGVKSIPHPGYSHPGHSNDLMLIKLNRRIRPTK
DVRPINVSSHCP SAGTKCLVSGWGTTKSPQVHFPKVLQCLNISVLSQKRCE
DAYPRQIDDTMFCAGDKAGRDSCQGDSSGPVVCNGSLQGLVSWGDYPC
ARPNRPGVYTNLCKFTKWIQETIQANS (SEQ ID NO: 2)

[Fig. 11]

Amino acid sequence of human KLK7

IIDGAPCARGSHPWQVALLSGNQLHCGGVLVNERWVLTAHCKMNEYTVH
LGSDTLGDRRAQRIKASKSFRHPGYSTQTHVNDLMLVKLNSQARLSSMVK
KVRLPSRCEPPGTTCTVSGWGTTTSPDVTFPSDLMCVDVKLISPQDCTKVY
KDLENSMLCAGIPDSKKNACNGDSSGGLVCRGTLQGLVSWGTFPCGQP
NDPGVYTQVCKFTKWINDTMKKHR (SEQ ID NO: 3)

[Fig. 12]

Amino acid sequence of human KLK14

IIGGHTCTRSSQPWQAALLAGPRRRFLCGGALLSGQWVITAAHCGRPILQV
ALGKHNLRRWEATQQVLRVVRQVTHPNYNSRTHDNDLMLLQLQQPARIGR
AVRPIEVTQACASPGTSCRVSGWGTISSPIARYPASLQCVNINISPDEVCK
AYPRTITPGMVCAGVPQGGKDSCQGDSSGGLVCRGQLQGLVSWGMERC
ALPGYPGVYTNLCKYRSWIEETMRDK (SEQ ID NO: 4)

[Fig. 13]

Nucleotide sequence of the KLK5 inhibitory peptide K50032

GGCCCGCAGTTTGGTCTGTTTAGCAAATATCGTACCCCGAATTGTCTGA
ACTGGACTGACCATCAGTGTGAACGTGACTACGACCCGGTTTGTGGTA
GCGATATGAGCACCTATGCAAATGAATGTACCCTGTGCATGAAAATTCG
TGAAGGTGGCCATAATATTAATAATTATTCGCAATGGTCCGTGCGGCGGC
TAA (SEQ ID NO: 5)

[Fig. 14]

Amino acid sequence of the KLK5 inhibitory peptide K50032

GPQFGLFSKYRTPNCLNWDHQCERDYPVCGSDMSTYANECTLCMKIR
EGGHNIKIIRNGPCGG (SEQ ID NO: 6)

[Fig. 15]

Nucleotide sequence of the KLK5 inhibitory peptide K50055

GGCCCGCAGTTTGGTCTGTTTAGCAAATATCGTACCCCGAATTGTGCTA
ACACTATGAAACAGGACTGTACTCGTGAATACGACCCGGTTTGTGGTAG
CGATATGAGCACCTATGCAAATGAATGTACCCTGTGCATGAAAATTCGT
GAAGGTGGCCATAATATTAATAATTATTCGCAATGGTCCGTGCGGCGGCT
AA (SEQ ID NO: 7)

[Fig. 16]

Amino acid sequence of the KLK5 inhibitory peptide K50055

GPQFGLFSKYRTPNCANTMKQDCTREYDPVCGSDMSTYANECTLCMKIRE
GGHNIKIIRNGPCGG (SEQ ID NO: 8)

[Fig. 17]

Nucleotide sequence of the KLK5 inhibitory peptide K51072

GGCCCGCAGTTTGGTCTGTTTAGCAAATATCGTACCCCGAATTGTCAGG
AAGACATGACTGAATACTGTGCTCGTGACTTCGACCCGGTTTGTGGTAG
CGATATGAGCACCTATGCAAATGAATGTACCCTGTGCATGAAAATTCGT
GAAGGTGGCCATAATATTAATAATTATTCGCAATGGTCCGTGCGGCGGCT
AA (SEQ ID NO: 9)

[Fig. 18]

Amino acid sequence of the KLK5 inhibitory peptide K51072

GPQFGLFSKYRTPNCQEDMTEYCARDPFCGSDMSTYANECTLCMKIRE
GGHNIKIIRNGPCGG (SEQ ID NO: 10)

[Fig. 19]

Nucleotide sequence of the KLK5 inhibitory peptide K50016

GGCCCGCAGTTTGGTCTGTTTAGCAAATATCGTACCCCGAATTGTTCTC
AGTGGCAGTACTCTTCTTGTGACCGTGTTTACGACCCGGTTTGTGGTAG
CGATATGAGCACCTATGCAAATGAATGTACCCTGTGCATGAAAATTCGT
GAAGGTGGCCATAATATTAATAATTATTCGCAATGGTCCGTGCGGCGGCT
AA (SEQ ID NO: 11)

[Fig. 20]

Amino acid sequence of the KLK5 inhibitory peptide K50016

GPQFGLFSKYRTPNCSQWQYSSCDRVYDPVCGSDMSTYANECTLCMKIR
EGGHNIKIIRNGPCGG (SEQ ID NO: 12)

[Fig. 21]

Nucleotide sequence of the KLK5 inhibitory peptide K51034

GGCCCGCAGTTTGGTCTGTTTAGCAAATATCGTACCCCGAATTGTGGTC
GTTACACTACTGGTGGTTGTAACAAAGAATACGAACCGGTTTGTGGTAG
CGATATGAGCACCTATGCAAATGAATGTACCCTGTGCATGAAAATTCGT
GAAGGTGGCCATAATATTAATAATTATTCGCAATGGTCCGTGCGGCGGCT
AA (SEQ ID NO: 13)

[Fig. 22]

Amino acid sequence of the KLK5 inhibitory peptide K51034

GPQFGLFSKYRTPNCGRYTTGGCNKEYEPVCGSDMSTYANECTLCMKIRE
GGHNIKIIRNGPCGG (SEQ ID NO: 14)

[Fig. 23]

Nucleotide sequence of the KLK5 inhibitory peptide K50062

GGCCCGCAGTTTGGTCTGTTTAGCAAATATCGTACCCCGAATTGTCAGC
AGTACCGTGAACTGGGTTGTGGTCGTCAGTACGACCCGGTTTGTGGTA
GCGATATGAGCACCTATGCAAATGAATGTACCCTGTGCATGAAAATTCG
TGAAGGTGGCCATAATATTAATAATTATTCGCAATGGTCCGTGCGGCGGC
TAA (SEQ ID NO: 15)

[Fig. 24]

Amino acid sequence of the KLK5 inhibitory peptide K50062

GPQFGLFSKYRTPNCQQYRELGCGRQYDPVCGSDMSTYANECTLCMKIR
EGGHNIIRNGPCGG (SEQ ID NO: 16)

[Fig. 25]

Nucleotide sequence of the KLK5 inhibitory peptide K51090

GGCCCGCAATTTGGTCTGTTTAGCAAATATCGTACCCCGAATTGTGACG
AAATCGGTAAATACGGTTGTGGTCGTTCTTACGACCCGGTTTGTGGTAG
CGATATGAGCACCTATGCAAATGAATGTACCCTGTGCATGAAAATTCGT
GAAGGTGGCCATAATATTAATAATTATTCGCAATGGTCCGTGCGGCGGCT
AA (SEQ ID NO: 17)

[Fig. 26]

Amino acid sequence of the KLK5 inhibitory peptide K51090

GPQFGLFSKYRTPNCDEIGKYGCGRSYDPVCGSDMSTYANECTLCMKIRE
GGHNIIRNGPCGG (SEQ ID NO: 18)

[Fig. 27]

Nucleotide sequence of the KLK5 inhibitory peptide K50098

GGCCCGCAGTTTGGTCTGTTTAGCAAATATCGTACCCCGAATTGTACTT
CTCAGACTCTGGGTTCTTGTTCCTCGTGAATACGACCCGGTTTGTGGTAG
CGATATGAGCACCTATGCAAATGAATGTACCCTGTGCATGAAAATTCGT
GAAGGTGGCCATAATATTAATAATTATTCGCAATGGTCCGTGCGGCGGCT
AA (SEQ ID NO: 19)

[Fig. 28]

Amino acid sequence of the KLK5 inhibitory peptide K50098

GPQFGLFSKYRTPNCTSQTLGSCSREYDPVCGSDMSTYANECTLCMKIRE
GGHNIKIIRNGPCGG (SEQ ID NO: 20)

[Fig. 29]

Nucleotide sequence of the KLK5/KLK7 inhibitory peptide K51028

GGCCCGCAGTTTGGTCTGTTTAGCAAATATCGTACCCCGAATTGTTACC
AGTACCGTTCTAAAGGTTGTACTCATGAATACGACCCGGTTTGTGGTAG
CGATATGAGCACCTATGCAAATGAATGTACCCTGTGCATGAAAATTCGT
GAAGGTGGCCATAATATTAATAATTATTCGCAATGGTCCGTGCGGCGGCT
AA (SEQ ID NO: 21)

[Fig. 30]

Amino acid sequence of the KLK5/KLK7 inhibitory peptide K51028

GPQFGLFSKYRTPNCYQYRSKGCTHEYDPVCGSDMSTYANECTLCMKIRE
GGHNIKIIRNGPCGG (SEQ ID NO: 22)

[Fig. 31]

Nucleotide sequence of the KLK5/KLK7 inhibitory peptide K51005

GGCCCGCAGTTTGGTCTGTTTAGCAAATATCGTACCCCGAATTGTATGC
AGCATGCTCGTCAGGGTTGTCATTACGACTACGACCCGGTTTGTGGTAG
CGATATGAGCACCTATGCAAATGAATGTACCCTGTGCATGAAAATTCGT
GAAGGTGGCCATAATATTAATAATTATTCGCAATGGTCCGTGCGGCGGCT
AA (SEQ ID NO: 23)

[Fig. 32]

Amino acid sequence of the KLK5/KLK7 inhibitory peptide K51005

GPQFGLFSKYRTPNCMQHARQGCHYDYPVCGSDMSTYANECTLCMKIR
EGGHNIKIIRNGPCGG (SEQ ID NO: 24)

[Fig. 33]

Nucleotide sequence of the KLK5/KLK7 inhibitory peptide K50031

GGCCCGCAGTTTGGTCTGTTTAGCAAATATCGTACCCCGAATTGTGGTG
AATACAAAGGTCGTGGTTGTTACTACCATTACGACCCGGTTTGTGGTAG
CGATATGAGCACCTATGCAAATGAATGTACCCTGTGCATGAAAATTCGT
GAAGGTGGCCATAATATTAATAATTATTCGCAATGGTCCGTGCGGCGGCT
AA (SEQ ID NO: 25)

[Fig. 34]

Amino acid sequence of the KLK5/KLK7 inhibitory peptide K50031

GPQFGLFSKYRTPNCGEYKGRGCYYHYDPVCGSDMSTYANECTLCMKIR
EGGHNIKIIRNGPCGG (SEQ ID NO: 26)

[Fig. 35]

Nucleotide sequence of the KLK5/KLK7 inhibitory peptide K51057

GGCCCGCAGTTTGGTCTGTTTAGCAAATATCGTACCCCGAATTGTGGTA
CTATGCAGGGTTCTGGTTGTACTTACCATTACGAACCGGTTTGTGGTAG
CGATATGAGCACCTATGCAAATGAATGTACCCTGTGCATGAAAATTCGT
GAAGGTGGCCATAATATTAATAATTATTCGCAATGGTCCGTGCGGCGGCT
AA (SEQ ID NO: 27)

[Fig. 36]

Amino acid sequence of the KLK5/KLK7 inhibitory peptide K51057

GPQFGLFSKYRTPNCGTMQSGCTYHYEPVCGSDMSTYANECTLCMKIR
EGGHNIIRNGPCGG (SEQ ID NO: 28)

[Fig. 37]

Nucleotide sequence of the KLK5/KLK14 inhibitory peptide K51069

GGCCCGCAGTTTGGTCTGTTTAGCAAATATCGTACCCCGAATTGTTCTC
AGGTTGTTGAACTTACTGTAACCGTGACTACGACCCGGTTTGTGGTAG
CGATATGAGCACCTATGCAAATGAATGTACCCTGTGCATGAAAATTCGT
GAAGGTGGCCATAATATTAATAATTATTCGCAATGGTCCGTGCGGCGGCT
AA (SEQ ID NO: 29)

[Fig. 38]

Amino acid sequence of the KLK5/KLK14 inhibitory peptide K51069

GPQFGLFSKYRTPNCSQVVETYCNRDYDPVCGSDMSTYANECTLCMKIRE
GGHNIIRNGPCGG (SEQ ID NO: 30)

[Fig. 39]

Nucleotide sequence of the KLK5/KLK14 inhibitory peptide K50015

GGCCCGCAGTTTGGTCTGTTTAGCAAATATCGTACCCCGAATTGTTACG
ACACTACTACTCATTACTGTTCTCGTGAATACGACCCGGTTTGTGGTAG
CGATATGAGCACCTATGCAAATGAATGTACCCTGTGCATGAAAATTCGT
GAAGGTGGCCATAATATTAATAATTATTCGCAATGGTCCGTGCGGCGGCT
AA (SEQ ID NO: 31)

[Fig. 40]

Amino acid sequence of the KLK5/KLK14 inhibitory peptide K50015

GPQFGLFSKYRTPNCYDTTTHYCSREYDPVCGSDMSTYANECTLCMKIRE
GGHNIKIIRNGPCGG (SEQ ID NO: 32)

[Fig. 41]

Nucleotide sequence of the KLK5 inhibitory peptide Fc conjugate D3-K50032dN-Fc

GATGACGACGGCCCTCAGTTCGGCCTGTTCAAGTACAGAACCCCT
AACTGCCTGCAGTGGACTGACCATCAGTGTGAACGTGACTACGACCCT
GTGTGCGGCAGCGACATGAGCACCTACGCCAATGAGTGACCCCTGTGC
ATGAAGATCAGAGAAGGCGGCCACAACATCAAGATCATCCGGAATGGC
CCCTGCGAACCCAAGAGCTGCGACAAGACCCACACCTGTCCCCCTTGT
CCTGCCCCCGAACTGCTGGGAGGACCTAGCGTGTTCTGTTCCCCCCA
AAGCCCAAGGACACCCTGATGATCAGCCGGACCCCCGAAGTGACCTGC
GTGGTGGTGGATGTGTCCCACGAGGACCCTGAAGTGAAGTTCAATTGG
TACGTGGACGGCGTGGAAGTGCACAACGCCAAGACCAAGCCTAGAGAG
GAACAGTACAACCTCCACCTACCGGGTGGTGTCTGTGCTGACAGTGCTG
CATCAGGACTGGCTGAACGGCAAAGAGTACAAGTGCAAGGTGTCCAAC
AAGGCCCTGCCTGCCCCCATCGAGAAAACCATCAGCAAGGCCAAGGGC
CAGCCCCGCGAACCCCAGGTGTACACACTGCCCCCTAGCCGGGAAGA
GATGACCAAGAACCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTAC
CCCAGCGACATTGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAA
CAACTACAAGACCACCCCCCTGTGCTGGACAGCGACGGCTCATTCTT
CCTGTACAGCAAGCTGACCGTGGACAAGAGCCGGTGGCAGCAGGGCA
ACGTGTTTCAGCTGCAGCGTGATGCACGAGGCCCTGCACAACCACTACA
CCCAGAAGTCCCTGAGCCTGAGCCCCGGCAAATGA (SEO ID NO: 33)

[Fig. 42]

Amino acid sequence of the KLK5 inhibitory peptide Fc conjugate D3-K50032dN-Fc

DDDGPQFGLFSKYRTPNCLQWTDHQCERDYDPVCGSDMSTYANECTLCM
KIREGGHNIKIIRNGPCEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDT
LMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTY
RVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL
PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD
GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ
ID NO: 34)

[Fig. 43]

Nucleotide sequence of the KLK5 inhibitory peptide Fc conjugate D3-K50055-Fc

GATGACGACGGCCCTCAGTTCGGCCTGTTCAGCAAGTACAGAACCCCT
AACTGCGCTAACACTATGAAACAGGACTGTACTCGTGAATACGACCCTG
TGTGCGGCAGCGACATGAGCACCTACGCCAATGAGTGCACCCTGTGCA
TGAAGATCAGAGAAGGCGGCCACAACATCAAGATCATCCGGAATGGCC
CCTGCGAACCCAAGAGCTGCGACAAGACCCACACCTGTCCCCCTTGTC
CTGCCCCCGAACTGCTGGGAGGACCTAGCGTGTTCTGTTCCCCCAA
AGCCCAAGGACACCCTGATGATCAGCCGGACCCCCGAAGTGACCTGCG
TGGTGGTGGATGTGTCCCACGAGGACCCTGAAGTGAAGTTCAATTGGT
ACGTGGACGGCGTGGAAGTGCACAACGCCAAGACCAAGCCTAGAGAG
GAACAGTACAACCTCCACCTACCGGGTGGTGTCTGTGCTGACAGTGCTG
CATCAGGACTGGCTGAACGGCAAAGAGTACAAGTGCAAGGTGTCCAAC
AAGGCCCTGCCTGCCCCCATCGAGAAAACCATCAGCAAGGCCAAGGGC
CAGCCCCGCGAACCCCAGGTGTACACACTGCCCCCTAGCCGGGAAGA
GATGACCAAGAACCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTAC
CCCAGCGACATTGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAA
CAACTACAAGACCACCCCCCTGTGCTGGACAGCGACGGCTCATTCTT
CCTGTACAGCAAGCTGACCGTGGACAAGAGCCGGTGGCAGCAGGGCA
ACGTGTTTACGCTGCAGCGTGATGCACGAGGCCCTGCACAACCACTACA
CCCAGAAGTCCCTGAGCCTGAGCCCCGGCAAATGA (SEQ ID NO: 35)

[Fig. 44]

Amino acid sequence of the KLK5 inhibitory peptide Fc conjugate D3-K50055-

Fc

DDDGPQFGLFSKYRTPNCANTMKQDCTREYDPVCGSDMSTYANECTLCM
KIREGGHNIKIIRNGPCEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDT
LMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTY
RVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL
PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD
GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ
ID NO: 36)

[Fig. 45]

Nucleotide sequence of the KLK5 inhibitory peptide Fc conjugate D3-K51072-Fc

GATGACGACGGCCCTCAGTTCGGCCTGTTCAGCAAGTACAGAACCCCT
AACTGCCAGGAAGACATGACTGAATACTGTGCTCGTGACTTCGACCCTG
TGTGCGGCAGCGACATGAGCACCTACGCCAATGAGTGCACCCTGTGCA
TGAAGATCAGAGAAGGCGGCCACAACATCAAGATCATCCGGAATGGCC
CCTGCGAACCCAAGAGCTGCGACAAGACCCACACCTGTCCCCCTTGTC
CTGCCCCCGAACTGCTGGGAGGACCTAGCGTGTTCTGTTCCCCCAA
AGCCCAAGGACACCCTGATGATCAGCCGGACCCCCGAAGTGACCTGCG
TGGTGGTGGATGTGTCCCACGAGGACCCTGAAGTGAAGTTCAATTGGT
ACGTGGACGGCGTGGAAGTGCACAACGCCAAGACCAAGCCTAGAGAG
GAACAGTACAACTCCACCTACCGGGTGGTGTCTGTGCTGACAGTGCTG
CATCAGGACTGGCTGAACGGCAAAGAGTACAAGTGCAAGGTGTCCAAC
AAGGCCCTGCCTGCCCCCATCGAGAAAACCATCAGCAAGGCCAAGGGC
CAGCCCCGCGAACCCCAGGTGTACACACTGCCCCCTAGCCGGGAAGA
GATGACCAAGAACCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTAC
CCCAGCGACATTGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAA
CAACTACAAGACCACCCCCCTGTGCTGGACAGCGACGGCTCATTCTT
CCTGTACAGCAAGCTGACCGTGGACAAGAGCCGGTGGCAGCAGGGCA
ACGTGTTTACGCTGCAGCGTGATGCACGAGGCCCTGCACAACCACTACA
CCCAGAAGTCCCTGAGCCTGAGCCCCGGCAAATGA (SEQ ID NO: 37)

[Fig. 46]

Amino acid sequence of the KLK5 inhibitory peptide Fc conjugate D3-K51072-

Fc

DDDGPQFGLFSKYRTPNCQEDMTEYCARDPVCGSDMSTYANECTLCM
KIREGGHNIKIIRNGPCEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDT
LMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTY
RVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL
PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD
GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ
ID NO: 38)

[Fig. 47]

Nucleotide sequence of the KLK5 inhibitory peptide Fc conjugate D3-K50016dN-Fc

GATGACGACGGCCCTCAGTTCGGCCTGTTTCAGCAAGTACAGAACCCCT
AACTGCGGCCAGTGGCAGTACTCTTCTTGTGACCGTGTTTACGACCCTG
TGTGCGGCAGCGACATGAGCACCTACGCCAATGAGTGCACCCTGTGCA
TGAAGATCAGAGAAGGCGGCCACAACATCAAGATCATCCGGAATGGCC
CCTGCGAACCCAAGAGCTGCGACAAGACCCACACCTGTCCCCCTTGTC
CTGCCCCCGAACTGCTGGGAGGACCTAGCGTGTTCTGTTCCCCCAA
AGCCCAAGGACACCCTGATGATCAGCCGGACCCCCGAAGTGACCTGCG
TGGTGGTGGATGTGTCCCACGAGGACCCTGAAGTGAAGTTCAATTGGT
ACGTGGACGGCGTGGAAGTGCACAACGCCAAGACCAAGCCTAGAGAG
GAACAGTACAACTCCACCTACCGGGTGGTGTCTGTGCTGACAGTGCTG
CATCAGGACTGGCTGAACGGCAAAGAGTACAAGTGCAAGGTGTCCAAC
AAGGCCCTGCCTGCCCCCATCGAGAAAACCATCAGCAAGGCCAAGGGC
CAGCCCCGCGAACCCCAGGTGTACACACTGCCCCCTAGCCGGGAAGA
GATGACCAAGAACCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTAC
CCCAGCGACATTGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAA
CAACTACAAGACCACCCCCCTGTGCTGGACAGCGACGGCTCATTCTT
CCTGTACAGCAAGCTGACCGTGGACAAGAGCCGGTGGCAGCAGGGCA
ACGTGTTTCAGCTGCAGCGTGATGCACGAGGCCCTGCACAACCACTACA
CCCAGAAGTCCCTGAGCCTGAGCCCCGGCAAATGA (SEQ ID NO: 39)

[Fig. 48]

Amino acid sequence of the KLK5 inhibitory peptide Fc conjugate D3-K50016dN-Fc

DDDGPQFGLFSKYRTPNCGQWQYSSCDRVYDPVCGSDMSTYANECTLC
MKIREGGHNIKIIRNGPCEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKD
TLMISRTPEVTCVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNST
YRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYT
LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDS
DGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK

(SEQ ID NO: 40)

[Fig. 49]

Nucleotide sequence of the KLK5 inhibitory peptide Fc conjugate D3-K51034-Fc

GATGACGACGGCCCTCAGTTCGGCCTGTTCAGCAAGTACAGAACCCCT
AACTGCGGTCGTTACACTACTGGTGGTTGTAACAAAGAATACGAACCTG
TGTGCGGCAGCGACATGAGCACCTACGCCAATGAGTGCACCCTGTGCA
TGAAGATCAGAGAAGGCGGCCACAACATCAAGATCATCCGGAATGGCC
CCTGCGAACCCAAGAGCTGCGACAAGACCCACACCTGTCCCCCTTGTC
CTGCCCCCGAACTGCTGGGAGGACCTAGCGTGTTCTGTTCCCCCAA
AGCCCAAGGACACCCTGATGATCAGCCGGACCCCCGAAGTGACCTGCG
TGGTGGTGGATGTGTCCCACGAGGACCCTGAAGTGAAGTTCAATTGGT
ACGTGGACGGCGTGGAAGTGCACAACGCCAAGACCAAGCCTAGAGAG
GAACAGTACAACCTCCACCTACCGGGTGGTGTCTGTGCTGACAGTGCTG
CATCAGGACTGGCTGAACGGCAAAGAGTACAAGTGCAAGGTGTCCAAC
AAGGCCCTGCCTGCCCCCATCGAGAAAACCATCAGCAAGGCCAAGGGC
CAGCCCCGCGAACCCCAGGTGTACACACTGCCCCCTAGCCGGGAAGA
GATGACCAAGAACCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTAC
CCCAGCGACATTGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAA
CAACTACAAGACCACCCCCCTGTGCTGGACAGCGACGGCTCATTCTT
CCTGTACAGCAAGCTGACCGTGGACAAGAGCCGGTGGCAGCAGGGCA
ACGTGTTTACGCTGCAGCGTGATGCACGAGGCCCTGCACAACCACTACA
CCCAGAAGTCCCTGAGCCTGAGCCCCGGCAAATGA (SEQ ID NO: 41)

[Fig. 50]

Amino acid sequence of the KLK5 inhibitory peptide Fc conjugate D3-K51034-

Fc

DDDGPQFGLFSKYRTPNCGRYTTGGCNKEYEPVCGSDMSTYANECTLCM
KIREGGHNIKIIRNGPCEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDT
LMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTY
RVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL
PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD
GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ
ID NO: 42)

[Fig. 51]

Nucleotide sequence of the KLK5 inhibitory peptide Fc conjugate D3-K50062-

Fc

GATGACGACGGCCCTCAGTTCGGCCTGTTCAAGTACAGAACCCCT
AACTGCCAGCAGTACCGTGAAGTGGGTTGTGGTCGTCAGTACGACCCT
GTGTGCGGCAGCGACATGAGCACCTACGCCAATGAGTGACACCCTGTGC
ATGAAGATCAGAGAAGGCGGCCACAACATCAAGATCATCCGGAATGGC
CCCTGCGAACCCAAGAGCTGCGACAAGACCCACACCTGTCCCCCTTGT
CCTGCCCCCGAACTGCTGGGAGGACCTAGCGTGTTCTGTCCCCCA
AAGCCCAAGGACACCCTGATGATCAGCCGGACCCCCGAAGTGACCTGC
GTGGTGGTGGATGTGTCCCACGAGGACCCTGAAGTGAAGTTCAATTGG
TACGTGGACGGCGTGGAAGTGACAACGCCAAGACCAAGCCTAGAGAG
GAACAGTACAACCTCCACCTACCGGGTGGTGTCTGTGCTGACAGTGCTG
CATCAGGACTGGCTGAACGGCAAAGAGTACAAGTGCAAGGTGTCCAAC
AAGGCCCTGCCTGCCCCCATCGAGAAAACCATCAGCAAGGCCAAGGGC
CAGCCCCGCGAACCCCAGGTGTACACACTGCCCCCTAGCCGGGAAGA
GATGACCAAGAACCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTAC
CCCAGCGACATTGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAA
CAACTACAAGACCACCCCCCTGTGCTGGACAGCGACGGCTCATTCTT
CCTGTACAGCAAGCTGACCGTGGACAAGAGCCGGTGGCAGCAGGGCA
ACGTGTTCACTGTCAGCGTGATGCACGAGGCCCTGCACAACCACTACA
CCCAGAAGTCCCTGAGCCTGAGCCCCGGCAAATGA (SEQ ID NO: 43)

[Fig. 52]

Amino acid sequence of the KLK5 inhibitory peptide Fc conjugate D3-K50062-

Fc

DDDGPQFGLFSKYRTPNCQQYRELGCGRQYDPVCGSDMSTYANECTLCM
KIREGGHNIKIIRNGPCEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDT
LMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTY
RVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL
PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD
GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ
ID NO: 44)

[Fig. 53]

Nucleotide sequence of the KLK5 inhibitory peptide Fc conjugate D3-K51090-Fc

GATGACGACGGCCCTCAGTTCGGCCTGTTCAGCAAGTACAGAACCCCT
AACTGCGACGAAATCGGTAAATACGGTTGTGGTCGTTCTTACGACCCTG
TGTGCGGCAGCGACATGAGCACCTACGCCAATGAGTGCACCCTGTGCA
TGAAGATCAGAGAAGGCGGCCACAACATCAAGATCATCCGGAATGGCC
CCTGCGAACCCAAGAGCTGCGACAAGACCCACACCTGTCCCCCTTGTC
CTGCCCCCGAACTGCTGGGAGGACCTAGCGTGTTCTGTTCCCCCAA
AGCCCAAGGACACCCTGATGATCAGCCGGACCCCCGAAGTGACCTGCG
TGGTGGTGGATGTGTCCCACGAGGACCCTGAAGTGAAGTTCAATTGGT
ACGTGGACGGCGTGGAAGTGCACAACGCCAAGACCAAGCCTAGAGAG
GAACAGTACAACCTCCACCTACCGGGTGGTGTCTGTGCTGACAGTGCTG
CATCAGGACTGGCTGAACGGCAAAGAGTACAAGTGCAAGGTGTCCAAC
AAGGCCCTGCCTGCCCCCATCGAGAAAACCATCAGCAAGGCCAAGGGC
CAGCCCCGCGAACCCCAGGTGTACACACTGCCCCCTAGCCGGGAAGA
GATGACCAAGAACCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTAC
CCCAGCGACATTGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAA
CAACTACAAGACCACCCCCCTGTGCTGGACAGCGACGGCTCATTCTT
CCTGTACAGCAAGCTGACCGTGGACAAGAGCCGGTGGCAGCAGGGCA
ACGTGTTTACGCTGCAGCGTGATGCACGAGGCCCTGCACAACCACTACA
CCCAGAAGTCCCTGAGCCTGAGCCCCGGCAAATGA (SEQ ID NO: 45)

[Fig. 54]

Amino acid sequence of the KLK5 inhibitory peptide Fc conjugate D3-K51090-

Fc

DDDGPQFGLFSKYRTPNCDEIGKYGCGRSYDPVCGSDMSTYANECTLCM
KIREGGHNIKIIRNGPCEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDT
LMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTY
RVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL
PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD
GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ
ID NO: 46)

[Fig. 55]

Nucleotide sequence of the KLK5 inhibitory peptide Fc conjugate D3-K50098dN-Fc

GATGACGACGGCCCTCAGTTCGGCCTGTTTCAGCAAGTACAGAACCCCT
AACTGCGGCTCTCAGACTCTGGGTTCTTGTTCCTCGTGAATACGACCCTG
TGTGCGGCAGCGACATGAGCACCTACGCCAATGAGTGCACCCTGTGCA
TGAAGATCAGAGAAGGCGGCCACAACATCAAGATCATCCGGAATGGCC
CCTGCGAACCCAAGAGCTGCGACAAGACCCACACCTGTCCCCCTTGTC
CTGCCCCCGAACTGCTGGGAGGACCTAGCGTGTTCTGTTCCCCCAA
AGCCCAAGGACACCCTGATGATCAGCCGGACCCCCGAAGTGACCTGCG
TGGTGGTGGATGTGTCCCACGAGGACCCTGAAGTGAAGTTCAATTGGT
ACGTGGACGGCGTGGAAGTGCACAACGCCAAGACCAAGCCTAGAGAG
GAACAGTACAACCTCCACCTACCGGGTGGTGTCTGTGCTGACAGTGCTG
CATCAGGACTGGCTGAACGGCAAAGAGTACAAGTGCAAGGTGTCCAAC
AAGGCCCTGCCTGCCCCCATCGAGAAAACCATCAGCAAGGCCAAGGGC
CAGCCCCGCGAACCCCAGGTGTACACACTGCCCCCTAGCCGGGAAGA
GATGACCAAGAACCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTAC
CCCAGCGACATTGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAA
CAACTACAAGACCACCCCCCTGTGCTGGACAGCGACGGCTCATTCTT
CCTGTACAGCAAGCTGACCGTGGACAAGAGCCGGTGGCAGCAGGGCA
ACGTGTTTCAGCTGCAGCGTGATGCACGAGGCCCTGCACAACCACTACA
CCCAGAAGTCCCTGAGCCTGAGCCCCGGCAAATGA (SEQ ID NO: 47)

[Fig. 56]

Amino acid sequence of the KLK5 inhibitory peptide Fc conjugate D3-K50098dN-Fc

DDDGPQFGLFSKYRTPNCGSQTLGSCSREYDPVCGSDMSTYANECTLCM
KIREGGHNIKIIRNGPCEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDT
LMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTY
RVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL
PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD
GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ
ID NO: 48)

[Fig. 57]

Nucleotide sequence of the KLK5/KLK7 inhibitory peptide Fc conjugate D3-K51028-Fc

GATGACGACGGCCCTCAGTTCGGCCTGTTACAGCAAGTACAGAACCCCT
AACTGCTACCAGTACAGAAGCAAGGGCTGCACCCACGAGTACGATCCT
GTGTGCGGCAGCGACATGAGCACCTACGCCAATGAGTGCACCCTGTGC
ATGAAGATCAGAGAAGGCGGCCACAACATCAAGATCATCCGGAATGGC
CCCTGCGAACCCAAGAGCTGCGACAAGACCCACACCTGTCCCCCTTGT
CCTGCCCCCGAACTGCTGGGAGGACCTAGCGTGTTCTGTTCCCCCCA
AAGCCCAAGGACACCCTGATGATCAGCCGGACCCCCGAAGTGACCTGC
GTGGTGGTGGATGTGTCCCACGAGGACCCTGAAGTGAAGTTCAATTGG
TACGTGGACGGCGTGGAAGTGCACAACGCCAAGACCAAGCCTAGAGAG
GAACAGTACAACCTCCACCTACCGGGTGGTGTCTGTGCTGACAGTGCTG
CATCAGGACTGGCTGAACGGCAAAGAGTACAAGTGCAAGGTGTCCAAC
AAGGCCCTGCCTGCCCCCATCGAGAAAACCATCAGCAAGGCCAAGGGC
CAGCCCCGCGAACCCCAGGTGTACACACTGCCCCCTAGCCGGGAAGA
GATGACCAAGAACCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTAC
CCCAGCGACATTGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAA
CAACTACAAGACCACCCCCCTGTGCTGGACAGCGACGGCTCATTCTT
CCTGTACAGCAAGCTGACCGTGGACAAGAGCCGGTGGCAGCAGGGCA
ACGTGTTTCAGCTGCAGCGTGATGCACGAGGCCCTGCACAACCACTACA
CCCAGAAGTCCCTGAGCCTGAGCCCCGGCAAATGA (SEQ ID NO: 49)

[Fig. 58]

Amino acid sequence of the KLK5/KLK7 inhibitory peptide Fc conjugate D3-K51028-Fc

DDDGPQFGLFSKYRTPNCYQYRSKGCTHEYDPVCGSDMSTYANECTLCM
KIREGGHNIKIIRNGPCEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDT
LMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTY
RVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL
PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD
GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ
ID NO: 50)

[Fig. 59]

Nucleotide sequence of the KLK5/KLK7 inhibitory peptide Fc conjugate D3-K51005-Fc

GATGACGACGGCCCTCAGTTCGGCCTGTTTCAGCAAGTACAGAACCCCT
AACTGCATGCAGCATGCTCGTCAGGGTTGTCATTACGACTACGACCCTG
TGTGCGGCAGCGACATGAGCACCTACGCCAATGAGTGCACCCTGTGCA
TGAAGATCAGAGAAGGCGGCCACAACATCAAGATCATCCGGAATGGCC
CCTGCGAACCCAAGAGCTGCGACAAGACCCACACCTGTCCCCCTTGTC
CTGCCCCCGAACTGCTGGGAGGACCTAGCGTGTTCTGTTCCCCCAA
AGCCCAAGGACACCCTGATGATCAGCCGGACCCCCGAAGTGACCTGCG
TGGTGGTGGATGTGTCCCACGAGGACCCTGAAGTGAAGTTCAATTGGT
ACGTGGACGGCGTGGAAGTGCACAACGCCAAGACCAAGCCTAGAGAG
GAACAGTACAACCTCCACCTACCGGGTGGTGTCTGTGCTGACAGTGCTG
CATCAGGACTGGCTGAACGGCAAAGAGTACAAGTGCAAGGTGTCCAAC
AAGGCCCTGCCTGCCCCCATCGAGAAAACCATCAGCAAGGCCAAGGGC
CAGCCCCGCGAACCCCAGGTGTACACACTGCCCCCTAGCCGGGAAGA
GATGACCAAGAACCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTAC
CCCAGCGACATTGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAA
CAACTACAAGACCACCCCCCTGTGCTGGACAGCGACGGCTCATTCTT
CCTGTACAGCAAGCTGACCGTGGACAAGAGCCGGTGGCAGCAGGGCA
ACGTGTTTCAGCTGCAGCGTGATGCACGAGGCCCTGCACAACCACTACA
CCCAGAAGTCCCTGAGCCTGAGCCCCGGCAAATGA (SEQ ID NO: 51)

[Fig. 60]

Amino acid sequence of the KLK5/KLK7 inhibitory peptide Fc conjugate D3-K51005-Fc

DDDGPQFGLFSKYRTPNCMQHARQGCHYDYPVCGSDMSTYANECTLC
MKIREGGHNIKIIRNGPCEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKD
TLMISRTPEVTCVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNST
YRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYT
LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPVLDS
DGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK

(SEQ ID NO: 52)

[Fig. 61]

Nucleotide sequence of the KLK5/KLK7 inhibitory peptide Fc conjugate D3-K50031-Fc

GATGACGACGGCCCTCAGTTCGGCCTGTTTCAGCAAGTACAGAACCCCT
AACTGCGGTGAATACAAAGGTCGTGGTTGTTACTACCATTACGACCCTG
TGTGCGGCAGCGACATGAGCACCTACGCCAATGAGTGCACCCTGTGCA
TGAAGATCAGAGAAGGCGGCCACAACATCAAGATCATCCGGAATGGCC
CCTGCGAACCCAAGAGCTGCGACAAGACCCACACCTGTCCCCCTTGTC
CTGCCCCCGAACTGCTGGGAGGACCTAGCGTGTTCTGTTCCCCCAA
AGCCCAAGGACACCCTGATGATCAGCCGGACCCCCGAAGTGACCTGCG
TGGTGGTGGATGTGTCCCACGAGGACCCTGAAGTGAAGTTCAATTGGT
ACGTGGACGGCGTGGAAGTGCACAACGCCAAGACCAAGCCTAGAGAG
GAACAGTACAACCTCCACCTACCGGGTGGTGTCTGTGCTGACAGTGCTG
CATCAGGACTGGCTGAACGGCAAAGAGTACAAGTGCAAGGTGTCCAAC
AAGGCCCTGCCTGCCCCCATCGAGAAAACCATCAGCAAGGCCAAGGGC
CAGCCCCGCGAACCCCAGGTGTACACACTGCCCCCTAGCCGGGAAGA
GATGACCAAGAACCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTAC
CCCAGCGACATTGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAA
CAACTACAAGACCACCCCCCTGTGCTGGACAGCGACGGCTCATTCTT
CCTGTACAGCAAGCTGACCGTGGACAAGAGCCGGTGGCAGCAGGGCA
ACGTGTTTCAGCTGCAGCGTGATGCACGAGGCCCTGCACAACCACTACA
CCCAGAAGTCCCTGAGCCTGAGCCCCGGCAAATGA (SEQ ID NO: 53)

[Fig. 62]

Amino acid sequence of the KLK5/KLK7 inhibitory peptide Fc conjugate D3-K50031-Fc

DDDGPQFGLFSKYRTPNCGEYKGRGCYYHYDPVCGSDMSTYANECTLCM
KIREGGHNIKIIRNGPCEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDT
LMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTY
RVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL
PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD
GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ
ID NO: 54)

[Fig. 63]

Nucleotide sequence of the KLK5/KLK7 inhibitory peptide Fc conjugate D3-K51057-Fc

GATGACGACGGCCCTCAGTTCGGCCTGTTCAGCAAGTACAGAACCCCT
AACTGCGGTACTATGCAGGGTTCTGGTTGTACTTACCATTACGAACCTG
TGTGCGGCAGCGACATGAGCACCTACGCCAATGAGTGCACCCTGTGCA
TGAAGATCAGAGAAGGCGGCCACAACATCAAGATCATCCGGAATGGCC
CCTGCGAACCCAAGAGCTGCGACAAGACCCACACCTGTCCCCCTTGTC
CTGCCCCCGAACTGCTGGGAGGACCTAGCGTGTTCTGTTCCCCCAA
AGCCCAAGGACACCCTGATGATCAGCCGGACCCCCGAAGTGACCTGCG
TGGTGGTGGATGTGTCCCACGAGGACCCTGAAGTGAAGTTCAATTGGT
ACGTGGACGGCGTGGAAGTGCACAACGCCAAGACCAAGCCTAGAGAG
GAACAGTACAACCTCCACCTACCGGGTGGTGTCTGTGCTGACAGTGCTG
CATCAGGACTGGCTGAACGGCAAAGAGTACAAGTGCAAGGTGTCCAAC
AAGGCCCTGCCTGCCCCCATCGAGAAAACCATCAGCAAGGCCAAGGGC
CAGCCCCGCGAACCCCAGGTGTACACACTGCCCCCTAGCCGGGAAGA
GATGACCAAGAACCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTAC
CCCAGCGACATTGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAA
CAACTACAAGACCACCCCCCTGTGCTGGACAGCGACGGCTCATTCTT
CCTGTACAGCAAGCTGACCGTGGACAAGAGCCGGTGGCAGCAGGGCA
ACGTGTTTACGCTGCAGCGTGATGCACGAGGCCCTGCACAACCACTACA
CCCAGAAGTCCCTGAGCCTGAGCCCCGGCAAATGA (SEQ ID NO: 55)

[Fig. 64]

Amino acid sequence of the KLK5/KLK7 inhibitory peptide Fc conjugate D3-K51057-Fc

DDDGPQFGLFSKYRTPNCGTMQGGSGCTYHYEPVCGSDMSTYANECTLCM
KIREGGHNIKIIRNGPCEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDT
LMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTY
RVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL
PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD
GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ
ID NO: 56)

[Fig. 65]

Nucleotide sequence of the KLK5/KLK14 inhibitory peptide Fc conjugate D3-K51069dN-Fc

GATGACGACGGCCCTCAGTTCGGCCTGTTCAAGTACAGAACCCCT
AACTGCGGCCAGGTTGTTGAACTTACTGTAACCGTGACTACGACCCTG
TGTGCGGCAGCGACATGAGCACCTACGCCAATGAGTGCACCCTGTGCA
TGAAGATCAGAGAAGGCGGCCACAACATCAAGATCATCCGGAATGGCC
CCTGCGAACCCAAGAGCTGCGACAAGACCCACACCTGTCCCCCTTGTC
CTGCCCCCGAACTGCTGGGAGGACCTAGCGTGTTCTGTTCCCCCAA
AGCCCAAGGACACCCTGATGATCAGCCGGACCCCCGAAGTGACCTGCG
TGGTGGTGGATGTGTCCCACGAGGACCCTGAAGTGAAGTTCAATTGGT
ACGTGGACGGCGTGGAAGTGCACAACGCCAAGACCAAGCCTAGAGAG
GAACAGTACAACTCCACCTACCGGGTGGTGTCTGTGCTGACAGTGCTG
CATCAGGACTGGCTGAACGGCAAAGAGTACAAGTGCAAGGTGTCCAAC
AAGGCCCTGCCTGCCCCCATCGAGAAAACCATCAGCAAGGCCAAGGGC
CAGCCCCGCGAACCCCAGGTGTACACACTGCCCCCTAGCCGGGAAGA
GATGACCAAGAACCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTAC
CCCAGCGACATTGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAA
CAACTACAAGACCACCCCCCTGTGCTGGACAGCGACGGCTCATTCTT
CCTGTACAGCAAGCTGACCGTGGACAAGAGCCGGTGGCAGCAGGGCA
ACGTGTTCAAGCTGCAGCGTGATGCACGAGGCCCTGCACAACCACTACA
CCCAGAAGTCCCTGAGCCTGAGCCCCGGCAAATGA (SEQ ID NO: 57)

[Fig. 66]

Amino acid sequence of the KLK5/KLK14 inhibitory peptide Fc conjugate D3-K51069dN-Fc

DDDGPQFGLFSKYRTPNCGQVVETVCNRDYPVCGSDMSTYANECTLCM
KIREGGHNIKIIRNGPCEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDT
LMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTY
RVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL
PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD
GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ
ID NO: 58)

[Fig. 67]

Nucleotide sequence of the KLK5/KLK14 inhibitory peptide Fc conjugate D3-K50015-Fc

GATGACGACGGCCCTCAGTTCGGCCTGTTTCAGCAAGTACAGAACCCCT
AACTGCTACGACACTACTACTCATTACTGTTCTCGTGAATACGACCCTGT
GTGCGGCAGCGACATGAGCACCTACGCCAATGAGTGCACCCTGTGCAT
GAAGATCAGAGAAGGCGGCCACAACATCAAGATCATCCGGAATGGCCC
CTGCGAACCCAAGAGCTGCGACAAGACCCACACCTGTCCCCCTTGTCC
TGCCCCCGAACTGCTGGGAGGACCTAGCGTGTTCTGTTCCCCCAA
GCCCAAGGACACCCTGATGATCAGCCGGACCCCGAAGTGACCTGCGT
GGTGGTGGATGTGTCCACGAGGACCCTGAAGTGAAGTTCAATTGGTA
CGTGGACGGCGTGGAAGTGCAACGCCAAGACCAAGCCTAGAGAGG
AACAGTACAACCTCCACCTACCGGGTGGTGTCTGTGCTGACAGTGCTGC
ATCAGGACTGGCTGAACGGCAAAGAGTACAAGTGCAAGGTGTCCAACA
AGGCCCTGCCTGCCCCCATCGAGAAAACCATCAGCAAGGCCAAGGGCC
AGCCCCGCGAACCCCAGGTGTACACACTGCCCCCTAGCCGGGAAGAG
ATGACCAAGAACCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTACC
CCAGCGACATTGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAAC
AACTACAAGACCACCCCCCTGTGCTGGACAGCGACGGCTCATTCTTC
CTGTACAGCAAGCTGACCGTGGACAAGAGCCGGTGGCAGCAGGGCAA
CGTGTTTCAGCTGCAGCGTGATGCACGAGGCCCTGCACAACCACTACAC
CCAGAAGTCCCTGAGCCTGAGCCCCGGCAAATGA (SEQ ID NO: 59)

[Fig. 68]

Amino acid sequence of the KLK5/KLK14 inhibitory peptide Fc conjugate D3-K50015-Fc

DDDGPQFGLFSKYRTPNCYDTTTHYCSREYDPVCGSDMSTYANECTLCM
KIREGGHNIKIIRNGPCEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDT
LMISRTPEVTCVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTY
RVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL
PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD
GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ
ID NO: 60)

[Fig. 69]

Formula of the SPINK2 mutant peptide

GPQFGLFSKYRTPNCX₁X₂X₃X₄X₅X₆X₇CX₈X₉X₁₀X₁₁X₁₂PVCGSDMSTYANE
CTLCKIREGGHNIKIIRNGPC (SEQ ID NO: 61)

[Fig. 70]

Nucleotide sequence of primer 1

AAAAGGATCCCTGGACAAACGTGGCCCGCAGTTTGGTCTGTTTAG (SEQ
ID NO: 62)

[Fig. 71]

Nucleotide sequence of primer 2

AAAACTCGAGTTAGCCGCCGCACGGACCATTGCGAATAA (SEQ ID NO:
63)

[Fig. 72]

Nucleotide sequence of primer 3

GGCGATTATAAAGATGACGATGATAAACACCATCACCACCATC (SEQ ID NO: 64)

[Fig. 73]

Nucleotide sequence of primer 4

GTTTAACTCAATGATGGTGGTGATGGTGTTTATCATCGTCAT (SEQ ID NO: 65)

[Fig. 74]

Nucleotide sequence of primer 5

AAAATCTAGAGCCGCCACCATGGCCACAGCTAGACCCCCT (SEQ ID NO:
66)

[Fig. 75]

Nucleotide sequence of primer 6

CGTCATCTTTATAATCGCCGCTGTTGGCCTGGATGGTTTCCTG (SEQ ID NO: 67)

[Fig. 76]

Nucleotide sequence of primer 7

AAAATCTAGAGCCGCCACCATGGCCAGATCTCTGCTGCTGCCC (SEQ ID NO: 68)

[Fig. 77]

Nucleotide sequence of primer 8

CGTCATCTTTATAATCGCCCCGGTGTTCCTTCATGGTGTCGTT (SEQ ID NO: 69)

[Fig. 78]

Nucleotide sequence of primer 9

AAAATCTAGAGCCGCCACCATGTTCTCCTCCTCACCGCCCTC (SEQ ID NO: 70)

[Fig. 79]

Nucleotide sequence of primer 10

CGTCATCTTTATAATCGCCCTTGTCGCGCATGGTCTCCTCGAT (SEQ ID NO: 71)

[Fig. 80]

Nucleotide sequence of primer 11

AAAAGTTTAACTCAATGATGGTGGTGATGGTGT (SEQ ID NO: 72)

[Fig. 81]

Nucleotide sequence of primer 12

AAAATCTAGAGCCGCCACCATGGGAGTGTGGCTGCTGAGCCTG (SEQ ID NO: 73)

[Fig. 82]

Nucleotide sequence of primer 13

AAAAGTTTAAACTCAATGATGGTGGTGGTGGTGGCGGTGGGTCTTCATG
GTTTCCATG (SEQ ID NO: 74)

[Fig. 83]

Nucleotide sequence of primer 14

AAAATCTAGAGCCGCCACCATGTTTCTGCTGCTGATCATCCTG (SEQ ID
NO: 75)

[Fig. 84]

Nucleotide sequence of primer 15

AAAAGTTTAAACTCAATGATGGTGGTGGTGGTGGTTGCTCTGCATGGTC
CGCTGAA (SEQ ID NO: 76)

[Fig. 85]

Amino acid sequence in the KLK7 substrate peptide

Arg-Pro-Lys-Pro-Val-Glu-Nval-Trp-Arg-Lys (SEQ ID NO: 77)

[Fig. 86]

Amino acid sequence in the chymotrypsin, chymase substrate peptide

Leu-Leu-Val-Tyr (SEQ ID NO: 78)

[Fig. 87]

Amino acid sequence in the neutrophil elastase substrate peptide

Ala-Ala-Pro-Val (SEQ ID NO: 79)

[Fig. 88]

Amino acid sequence in the protein C substrate peptide

Leu-Ser-Thr-Arg (SEQ ID NO: 80)

[Fig. 89]

Nucleotide sequence of primer 16

AGATGGGTGTTGTCTGATGACGACGGCCCTCAGTTCGGCCTGTTC (SEQ ID NO: 81)

[Fig. 90]

Nucleotide sequence of primer 17

GCAGGGGCCATTCCGGAT (SEQ ID NO: 82)

[Fig. 91]

Nucleotide sequence of primer 18

AAAATCTAGAGCCGCCACCATGAAGCACCTGTGGTTCTTTCTGCTGCT (SEQ ID NO: 83)

[Fig. 92]

Nucleotide sequence of primer 19

AGACAACACCCATCTAGGAGCGGCCACCAGCAGCAGAAAGAACC (SEQ ID NO: 84)

[Fig. 93]

Nucleotide sequence of primer 20

ATCCGGAATGGCCCCTGCGAACCCAAGAGCTGCGAC (SEQ ID NO: 85)

[Fig. 94]

Nucleotide sequence of primer 21

AAAAGTTTAAACTCATTTGCCGGGGCTCAG (SEQ ID NO: 86)

[Fig. 95]

Amino acid sequence of Fc of human IgG1

EPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDV
SHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLN
GKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLT
CLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFFLYSKLTVDKSR
WQQGNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ ID NO: 87)

[Fig. 96]

Amino acid sequence of D8 of human SPINK5 (E490-G551)

EAAKEICSEFRDQVRNGTLICTREHNPVRGPDGKMHGNKCAMCASVFKLE
EEEKKNDKEEKG (SEQ ID NO: 88)

[Fig. 97]

Amino acid sequence of D9 of human SPINK5 (E561-K622)

EAVQELCSEYRHYVRNGRLPCTRENDPIEGLDGKIHGNTCSMCEAFFQQE
AKEKERAEPRAK (SEQ ID NO: 89)

[Fig. 98]

Amino acid sequence of human SPINK9

IECAKQTKQMVDCSHYKKLPPGQQRFCHHMYDPICGSDGKTYKNDCFFCS
KVKKTDGTLKFVHFGKC (SEQ ID NO: 90)

[Fig. 99]

Amino acid sequence of mouse KLK5

RIVNGSDCQKDAQPWQGALLLGNKLYCGAVLISPQWLLTAAHCRKPVFRI
RLGHHSMSPVYESGQQMFQGIKSIPHPGYSHPGHSNDLMLIKMNRKIRDS
HSVKPVEIACDCATEGTRCMVSGWGTSSSHNNFPKVLQCLNITVLSEERC
KNSYPGQIDKTMFCAGDEEGRDSCQGDSSGPVVCNGKLQGLVSWGDFP
CAQRNRPGVYTNLCEFVKWIKDTMNSN (SEQ ID NO: 91)

[Fig. 100]

Amino acid sequence of mouse KLK7

RIIDGYKCKEGSHPWQVALLKGNQLHCGGVLDKYWVLTAAHCKMGQYQ
VQLGSDKIGDQSAQKIKATKSFRHPGYSTKTHVNDIMLVRLDEPVKMSSKV
EAVQLPEHCEPPGTSTVSGWGTTTSPDVTFPDLMCSDVKLISSRECKK
VYKDLLGKTMLCAGIPDSKTNTCNGDSGGPLVCNDTLQGLVSWGTYPCGQ
PNDPGVYTQVCKYKRWMETMKTHR (SEQ ID NO: 92)

[Fig. 101]

Amino acid sequence of mouse KLK14

IIGGYRCVRNSQPWQVALQAGPGHRFLCGGVLLSDQWVITAHCARPILHV
ALGKHNIIRWEATQQVVRVARQVPHYPQYQPAHDNDLMLLKLQKKVRLG
RAVKTISVASSCASPCTPCRVSOGWGTIASPIARYPTALQCVNVNIMSEQAC
HRAYPGIITSGMVCAGVPEGGKDSCQGDSSGGPLVCGGQLQGLVSWGMER
CAMPGYPGVYANLCNYHSWIQRTMQSN (SEQ ID NO: 93)

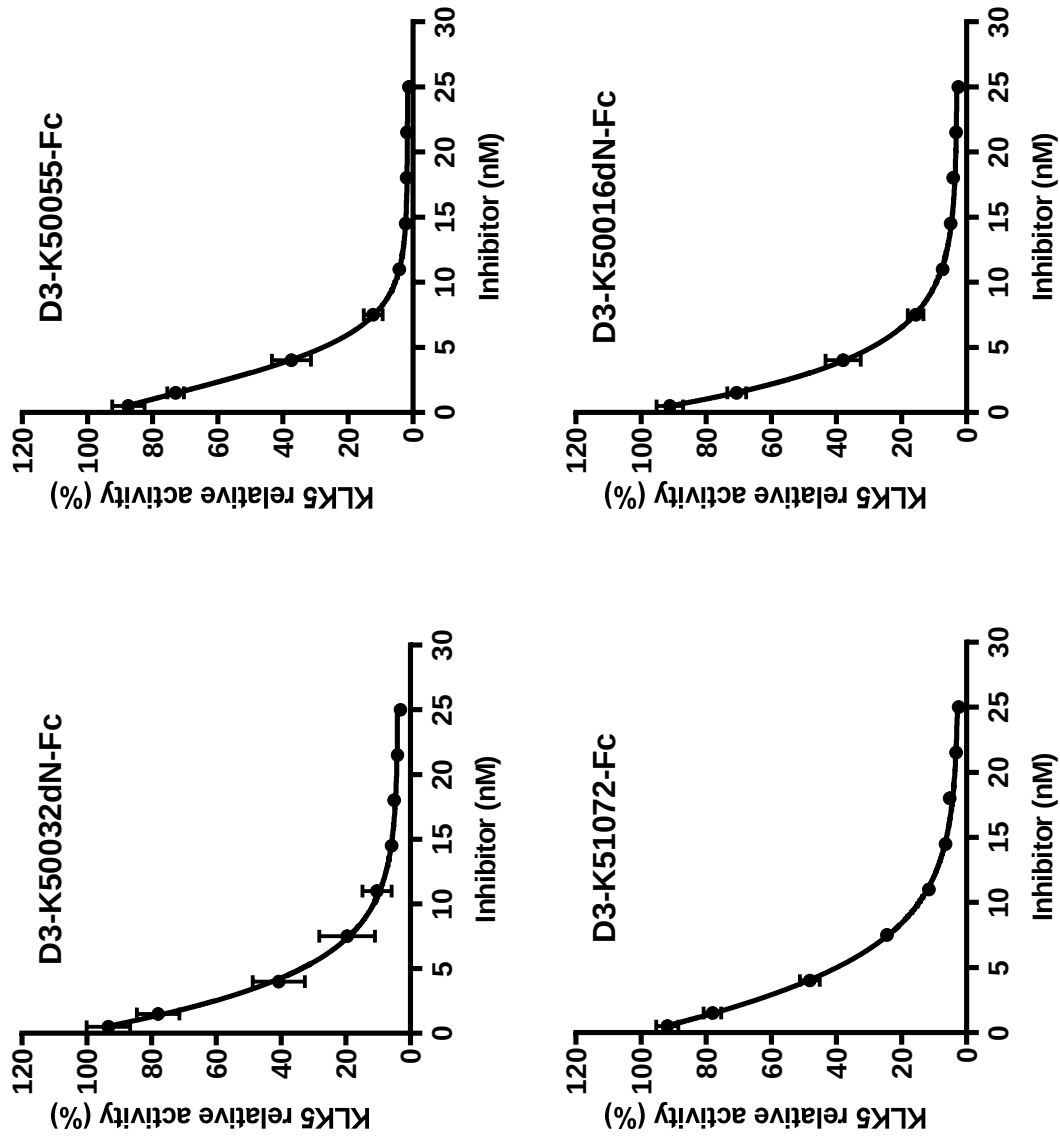


Fig. 102

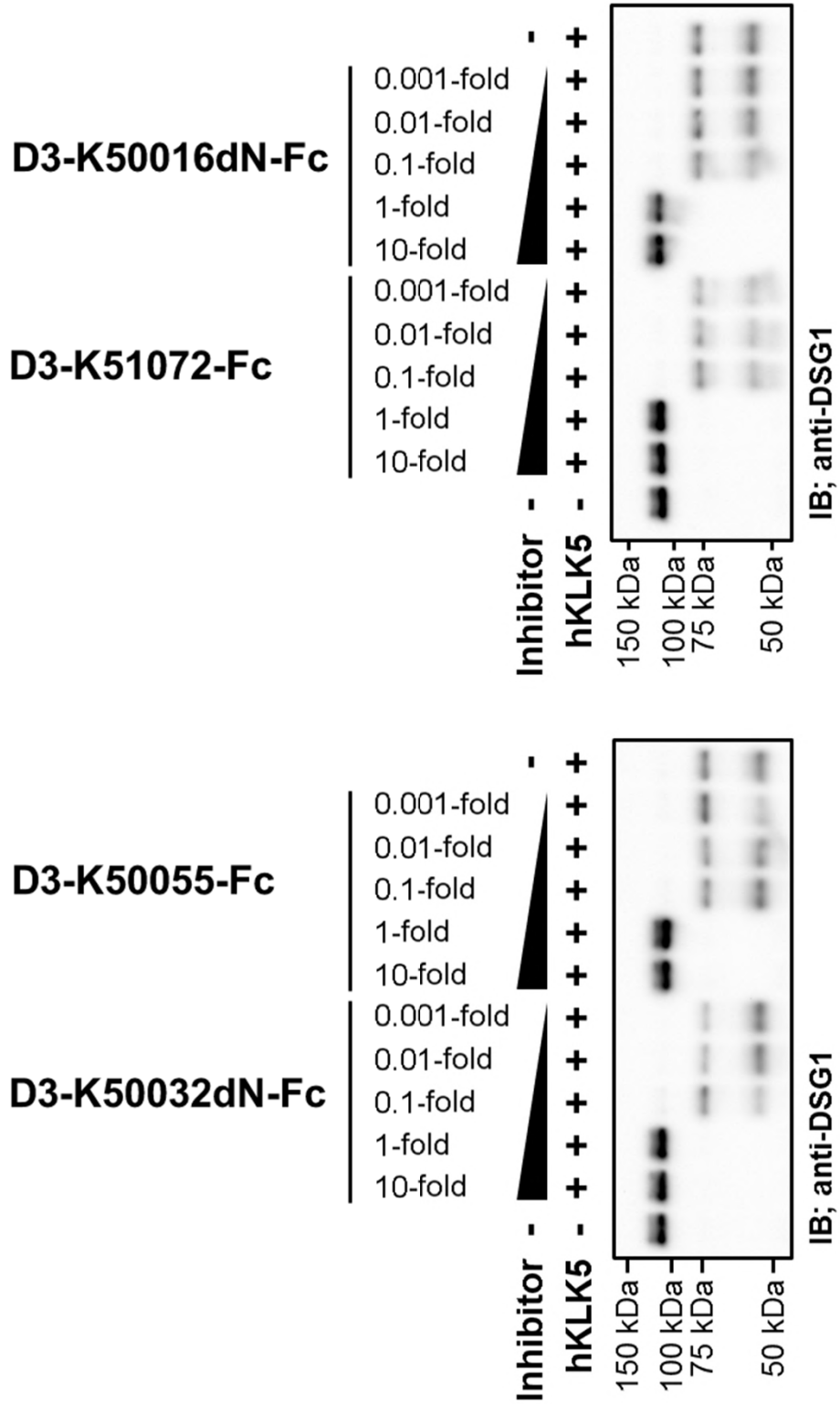


Fig. 103 (A)

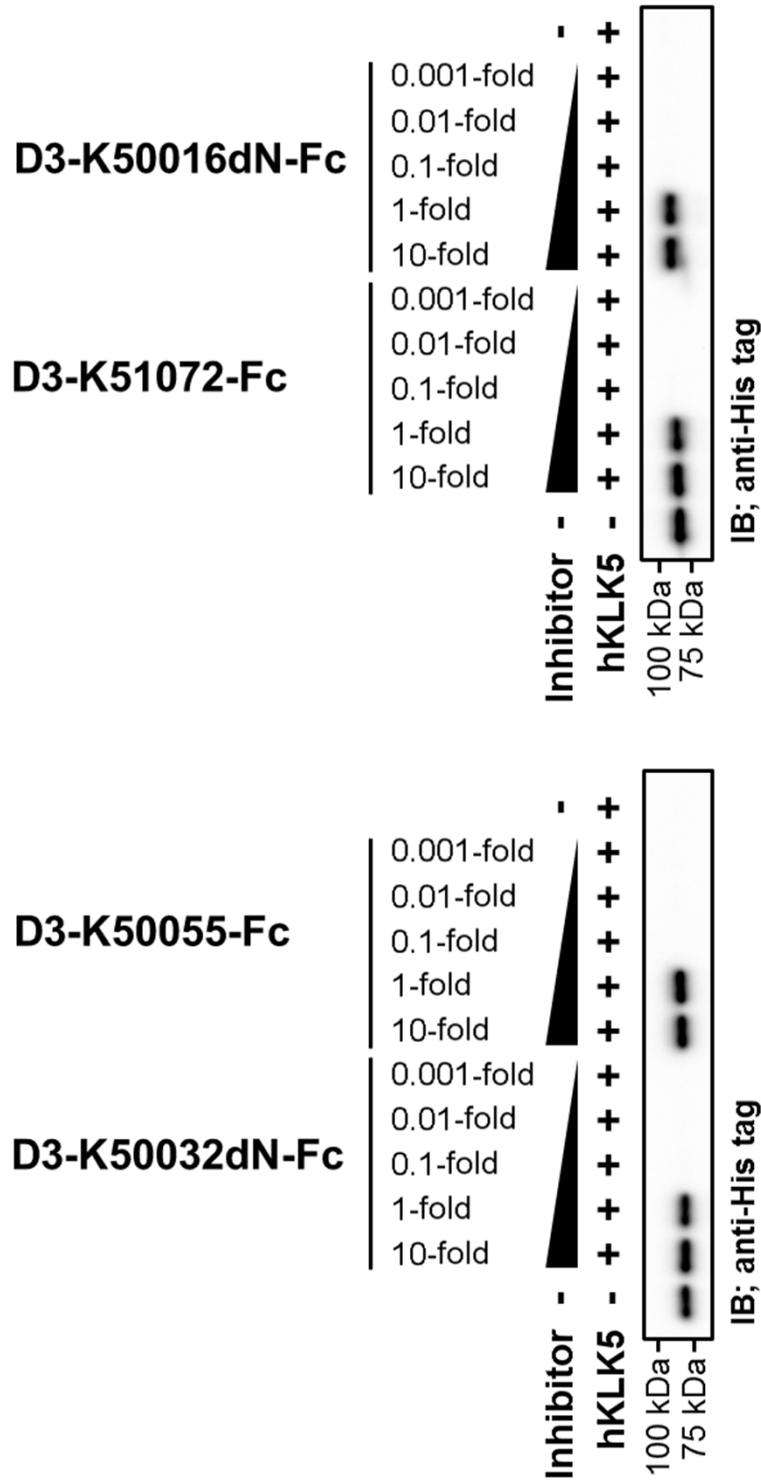


Fig. 103 (B)

[Fig. 104]

Nucleotide sequence of primer 22

AGATGGGTGTTGTCTGACGGCCCTCAGTTCGGCCTGTTC (SEQ ID NO:
94)

[Fig. 105]

Nucleotide sequence of the KLK5 inhibitory peptide Fc conjugate D1-K50055-Fc

GACGGCCCTCAGTTCGGCCTGTTCAGCAAGTACAGAACCCCTAACTGC
GCTAACACTATGAAACAGGACTGTACTCGTGAATACGACCCTGTGTGCG
GCAGCGACATGAGCACCTACGCCAATGAGTGCACCCTGTGCATGAAGA
TCAGAGAAGGCGGCCACAACATCAAGATCATCCGGAATGGCCCCTGCG
AACCCAAGAGCTGCGACAAGACCCACACCTGTCCCCCTTGTCTGCCC
CCGAAGTGTGGGAGGACCTAGCGTGTTCCTGTTCCCCCAAAGCCCA
AGGACACCCTGATGATCAGCCGGACCCCGAAGTGACCTGCGTGGTGG
TGGATGTGTCCCACGAGGACCCTGAAGTGAAGTTCAATTGGTACGTGG
ACGGCGTGGAAGTGCAACAACGCCAAGACCAAGCCTAGAGAGGAACAGT
ACAAGTCCACCTACCGGGTGGTGTCTGTGCTGACAGTGCTGCATCAGG
ACTGGCTGAACGGCAAAGAGTACAAGTGCAAGGTGTCCAACAAGGCCC
TGCCTGCCCCCATCGAGAAAACCATCAGCAAGGCCAAGGGCCAGCCCC
GCGAACCCCAGGTGTACACACTGCCCCCTAGCCGGGAAGAGATGACCA
AGAACCAGGTGTCCCTGACCTGTCTCGTGAAAGGCTTCTACCCCAGCG
ACATTGCCGTGGAATGGGAGAGCAACGGCCAGCCCGAGAACAACACTACA
AGACCACCCCCCTGTGCTGGACAGCGACGGCTCATTCTTCCTGTACA
GCAAGCTGACCGTGGACAAGAGCCGGTGGCAGCAGGGCAACGTGTTC
AGCTGCAGCGTGATGCACGAGGCCCTGCACAACCACTACACCCAGAAG
TCCCTGAGCCTGAGCCCCGGCAAATGA (SEQ ID NO: 95)

[Fig. 106]

Amino acid sequence of the KLK5 inhibitory peptide Fc conjugate D1-K50055-Fc

DGPQFGLFSKYRTPNCANTMKQDCTREYDPVCGSDMSTYANECTLCMKIR
EGGHNIKIIRNGPCEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMI
SRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVV
SVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPS
REEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSF
FLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ ID
NO: 96)

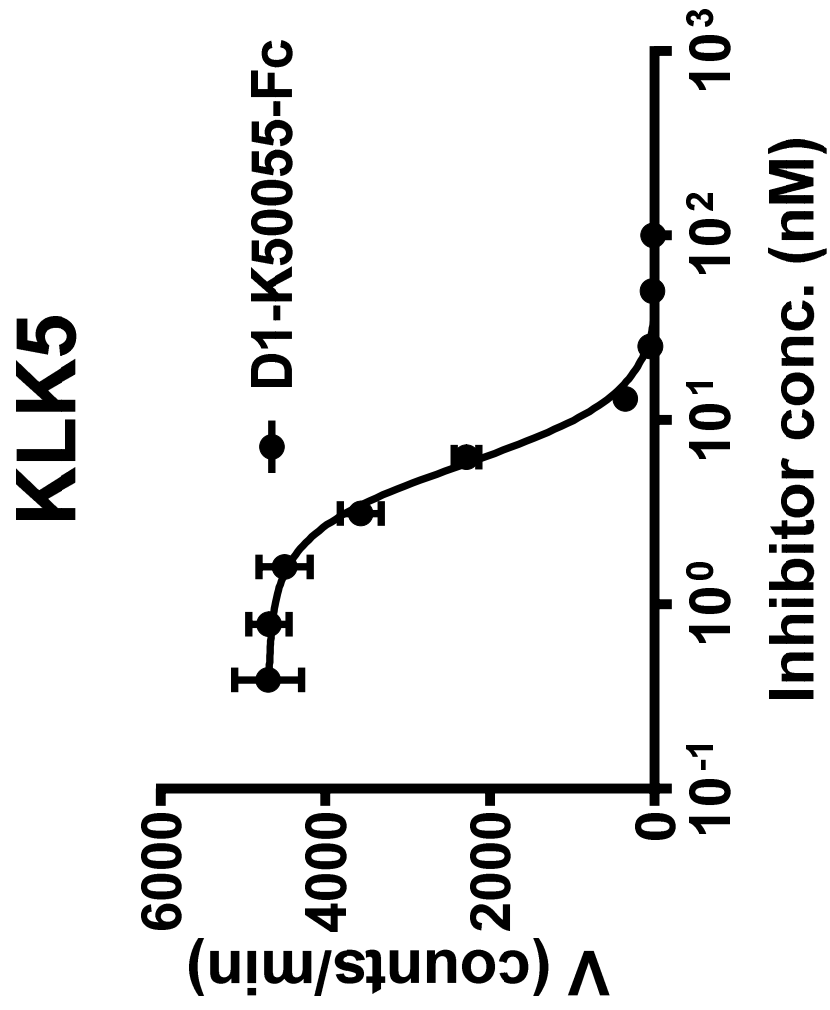


Fig. 107 (A)

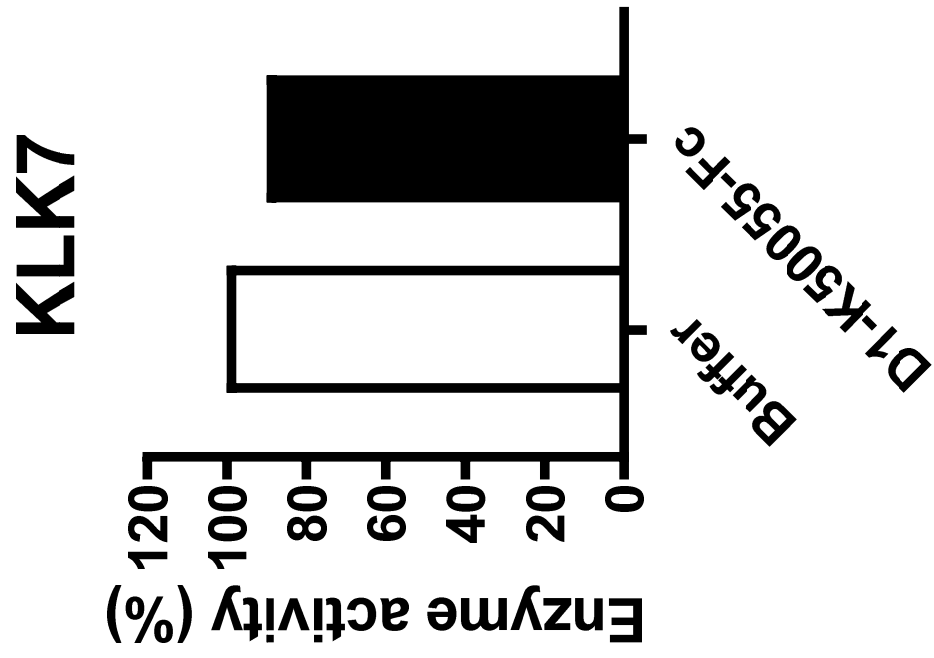


Fig. 107 (B)

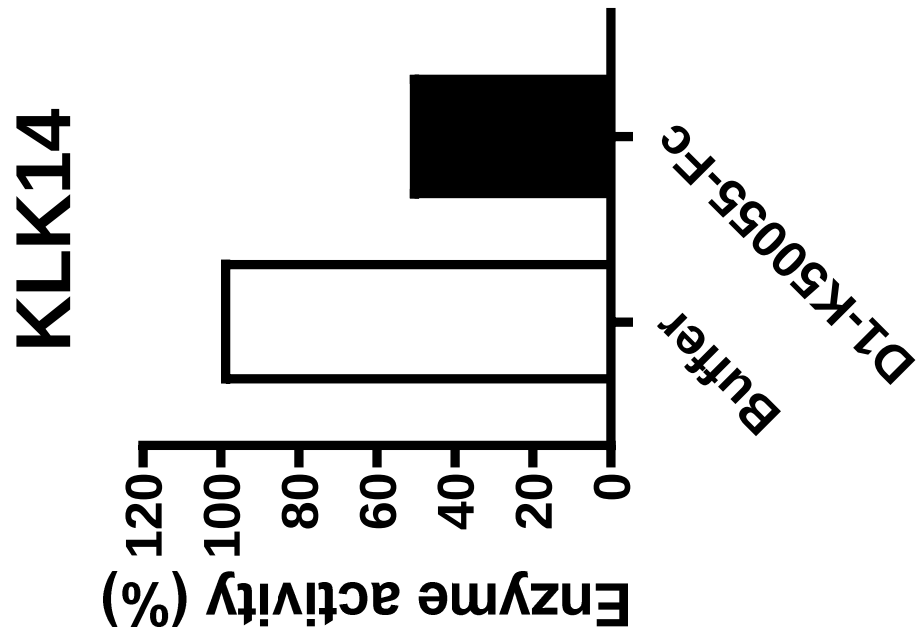


Fig. 107 (C)