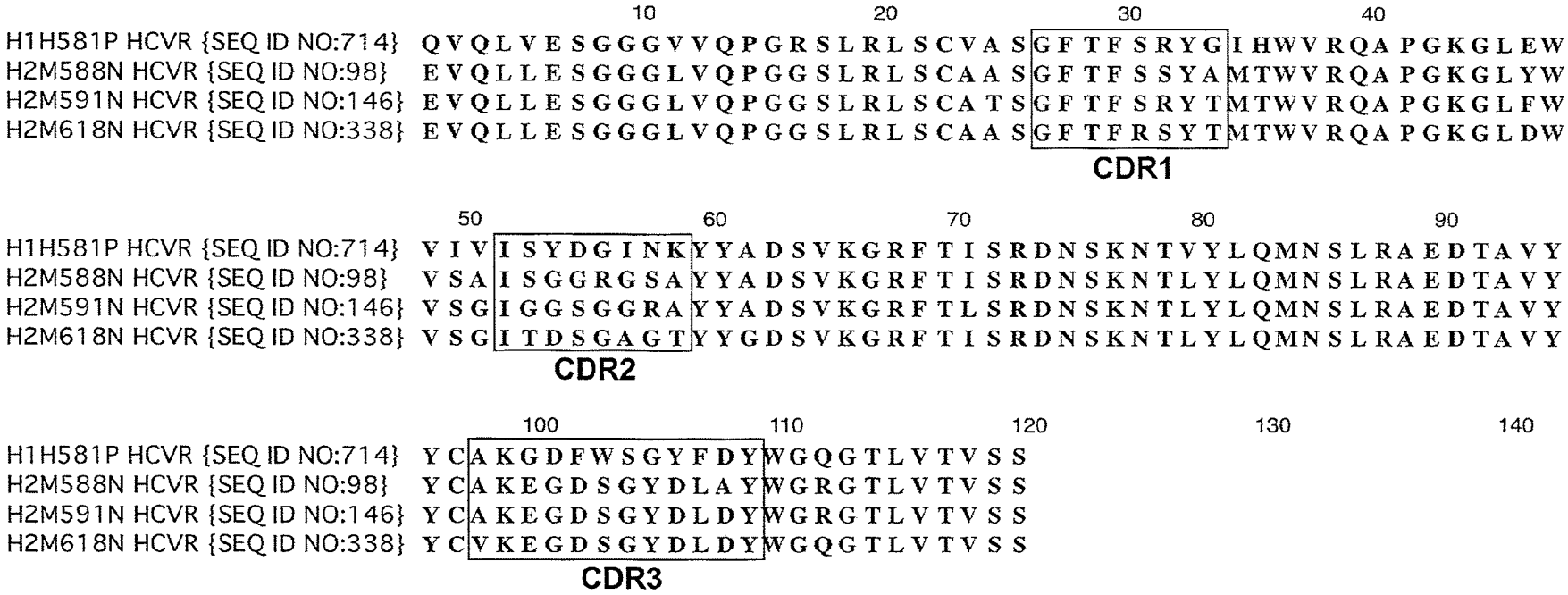

10 20 30 40
H1H581P HCVR {SEQ ID NO:714} QVQLVESGGGVVQPGRSLRLSCVASGFTFSRYGIHWVRQAPGKGLEW
H2M588N HCVR {SEQ ID NO:98} EVQLLESGGGLVQPGGSLRLSCAASGFTFSSYAMTWVRQAPGKGLYW
H2M591N HCVR {SEQ ID NO:146} EVQLLESGGGLVQPGGSLRLSCATSGFTFSRYTMTWVRQAPGKGLFW
H2M618N HCVR {SEQ ID NO:338} EVQLLESGGGLVQPGGSLRLSCAASGFTFRSYTMTWVRQAPGKGLDW
CDR1
50 60 70 80 90
H1H581P HCVR {SEQ ID NO:714} VIVISYDGINKYYADSVKGRFTISRDNSKNTVYLQMNSLRAEDTAVY
H2M588N HCVR {SEQ ID NO:98} VSAISGGRGSAYYADSVKGRFTISRDNSKNTLYLQMNSLRAEDTAVY
H2M591N HCVR {SEQ ID NO:146} VSGIGGSGGRAYYADSVKGRFTLSRDNSKNTLYLQMNSLRAEDTAVY
H2M618N HCVR {SEQ ID NO:338} VSGITDSGAGTYYGDSVKGRFTISRDNSKNTLYLQMNSLRAEDTAVY
CDR2
100 110 120 130 140
H1H581P HCVR {SEQ ID NO:714} YCAKGDFWSGYFDYWGQGTLVTVSS
H2M588N HCVR {SEQ ID NO:98} YCAKEGDSGYDLAYWGRGTLVTVSS
H2M591N HCVR {SEQ ID NO:146} YCAKEGDSGYDLDYWGRGTLVTVSS
H2M618N HCVR {SEQ ID NO:338} YCVKEGDSGYDLDYWGQGTLVTVSS
CDR3

Fig. 1

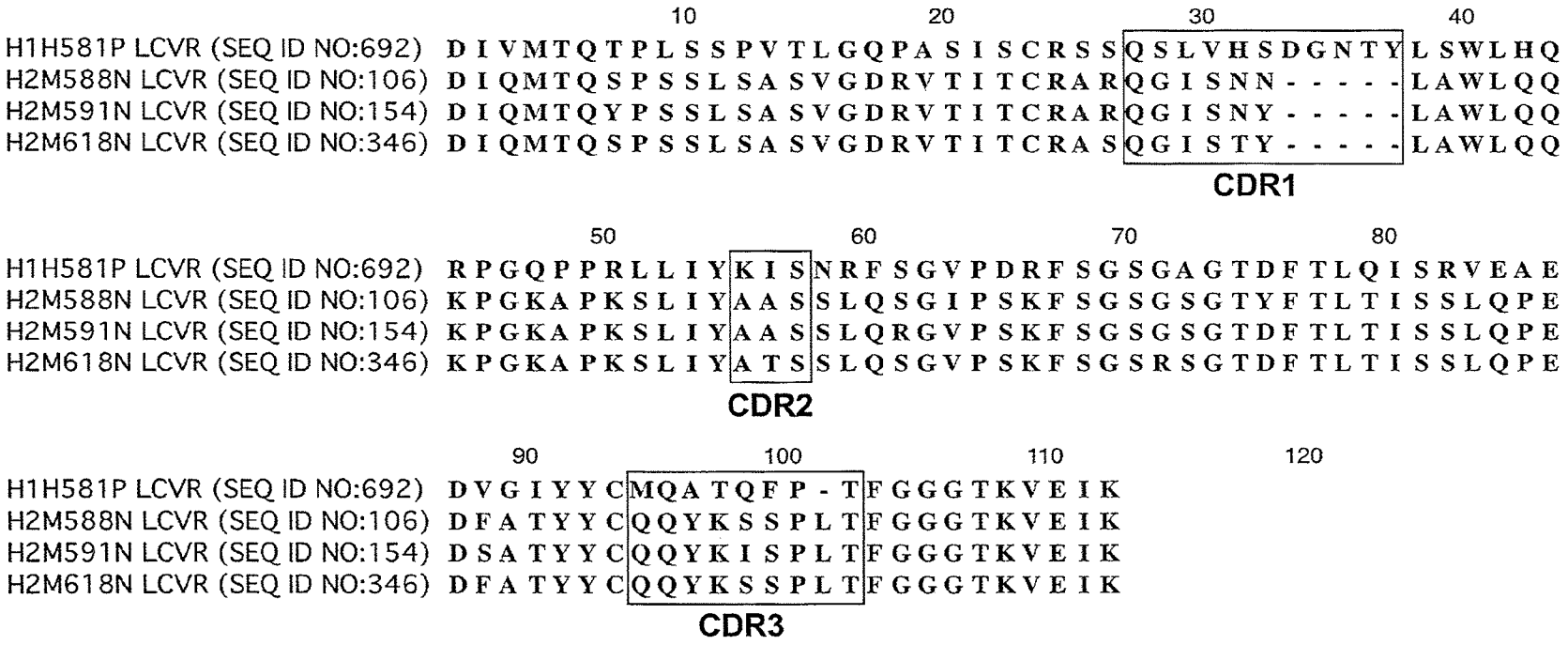

10 20 30 40
H1H581P LCVR (SEQ ID NO:692) DIVMTQTPLSSPVTLGQPASISCRSSQSLVHSDGNTYLSWLHQ
H2M588N LCVR (SEQ ID NO:106) DIQMTQSPSSLSASVGDRVTITCRARQGISNN-----LAWLQQ
H2M591N LCVR (SEQ ID NO:154) DIQMTQYPSSLSASVGDRVTITCRARQGISNY-----LAWLQQ
H2M618N LCVR (SEQ ID NO:346) DIQMTQSPSSLSASVGDRVTITCRASQGISTY-----LAWLQQ
CDR1
50 60 70 80
H1H581P LCVR (SEQ ID NO:692) RPGQPPRLLIYKISNRFSGVPDRFSGSGAGTDFTLQISRVEAE
H2M588N LCVR (SEQ ID NO:106) KPGKAPKSLIYAASSLQSGIPSKFSGSGSGTYFTLTISSLQPE
H2M591N LCVR (SEQ ID NO:154) KPGKAPKSLIYAASSLQRGVPSKFSGSGSGTDFTLTISSLQPE
H2M618N LCVR (SEQ ID NO:346) KPGKAPKSLIYATSSLQSGVPSKFSGSRSGTDFTLTISSLQPE
CDR2
90 100 110 120
H1H581P LCVR (SEQ ID NO:692) DVGIYYCMQATQFP-TFGGGTKVEIK
H2M588N LCVR (SEQ ID NO:106) DFATYYCQQYKSSPLTFGGGTKVEIK
H2M591N LCVR (SEQ ID NO:154) DSATYYCQQYKISPLTFGGGTKVEIK
H2M618N LCVR (SEQ ID NO:346) DFATYYCQQYKSSPLTFGGGTKVEIK
CDR3

Fig. 2

(A)

	C-terminal Biotin ① ② GTNRSSKGRSLIGKVDGT-**B**	N-terminal Biotin ① ② **B**-GTNRSSKGRSLIGKVDGT
No Cleavage	2501 kDa	2373 kDa
Cleavage @ ①	2073 kDa	988 kDa
Cleavage @ ②	1558 kDa	N/A

(B)

Antibody	**Time**	2501 kDa	2073 kDa	1558 kDa	2373 kDa	988 kDa
Neg Ctrl	0	X			X	
Neg Ctrl	5			X		X
Neg Ctrl	15			X		N/D
H4H581P	0	X			X	
H4H581P	5		X			X
H4H581P	15		X			N/D
H4H588N	0	X			X	
H4H588N	5			X		X
H4H588N	15			X		N/D

Fig. 3

(A)

	Mouse	Rat	Human
	①②③ GRNNSKGRSLIGRLETQPPI	②③ GPNSKGRSLIGRLDTP	①②③ GTNRSSKGRSLIGKVDGT
No Cleavage	2556 kDa	2337 kDa	2502 kDa
Cleavage @ ①	2342 kDa	N/A	2074 kDa
Cleavage @ ②	1898 kDa	1853 kDa	1772 kDa
Cleavage @ ③	1686 kDa	1640 kDa	1558 kDa

(B)

Antibody	Time	2556 kDa	2342 kDa	1898 kDa	1686 kDa	2337 kDa	1853 kDa	1640 kDa	2502 kDa	2074 kDa	1772 kDa	1558 kDa
Neg Ctrl	0	X				X			X			
Neg Ctrl	5				X			X				X
H4H581P	0	X				X			X			
H4H581P	5				X	X		X		X		
H4H588N	0	X				X			X			
H4H588N	5				X			X			X	X
Comp. Ab	0	X				X			X			
Comp. Ab	5				X			X	X			

Fig. 4

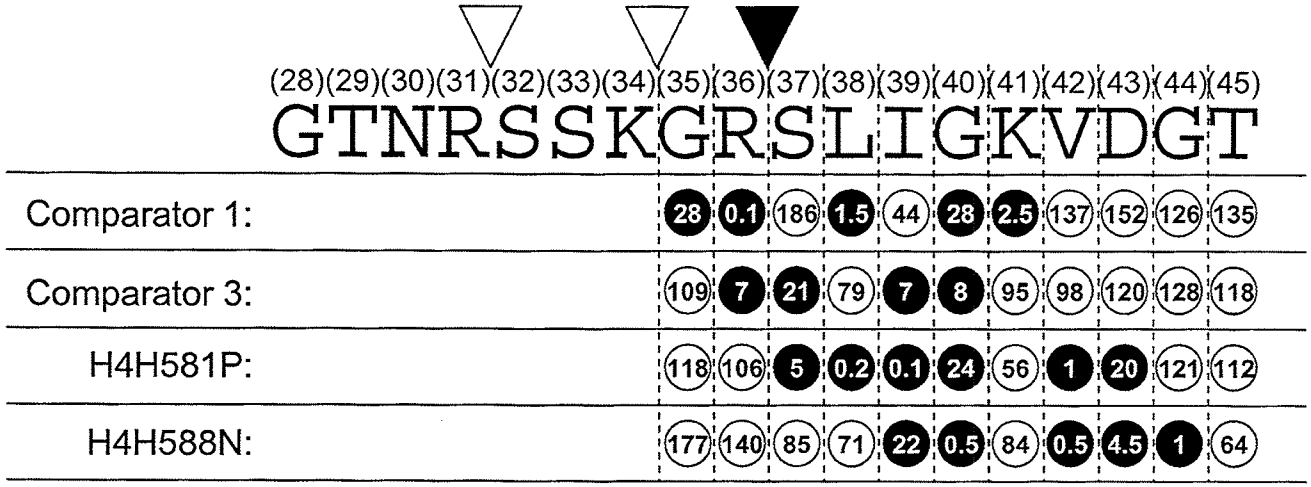

(28)(29)(30)(31)(32)(33)(34)(35)(36)(37)(38)(39)(40)(41)(42)(43)(44)(45)
GTNRSSKGRSLIGKVDGT
Comparator 1: 28 0.1 186 1.5 44 28 2.5 137 152 126 135
Comparator 3: 109 7 21 79 7 8 95 98 120 128 118
H4H581P: 118 106 5 0.2 0.1 24 56 1 20 121 112
H4H588N: 177 140 85 71 22 0.5 84 0.5 4.5 1 64

Fig. 5