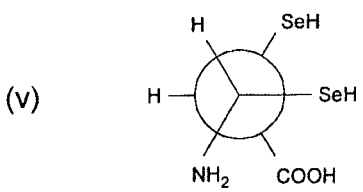
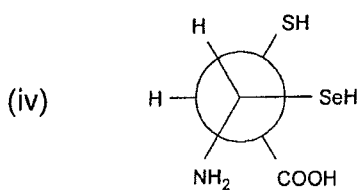
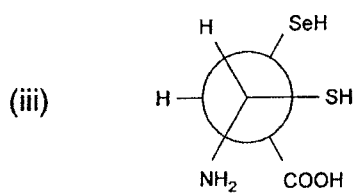
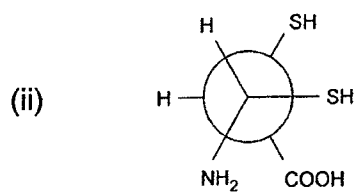
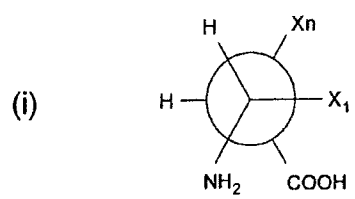


FIG. 1

**FIG. 2**

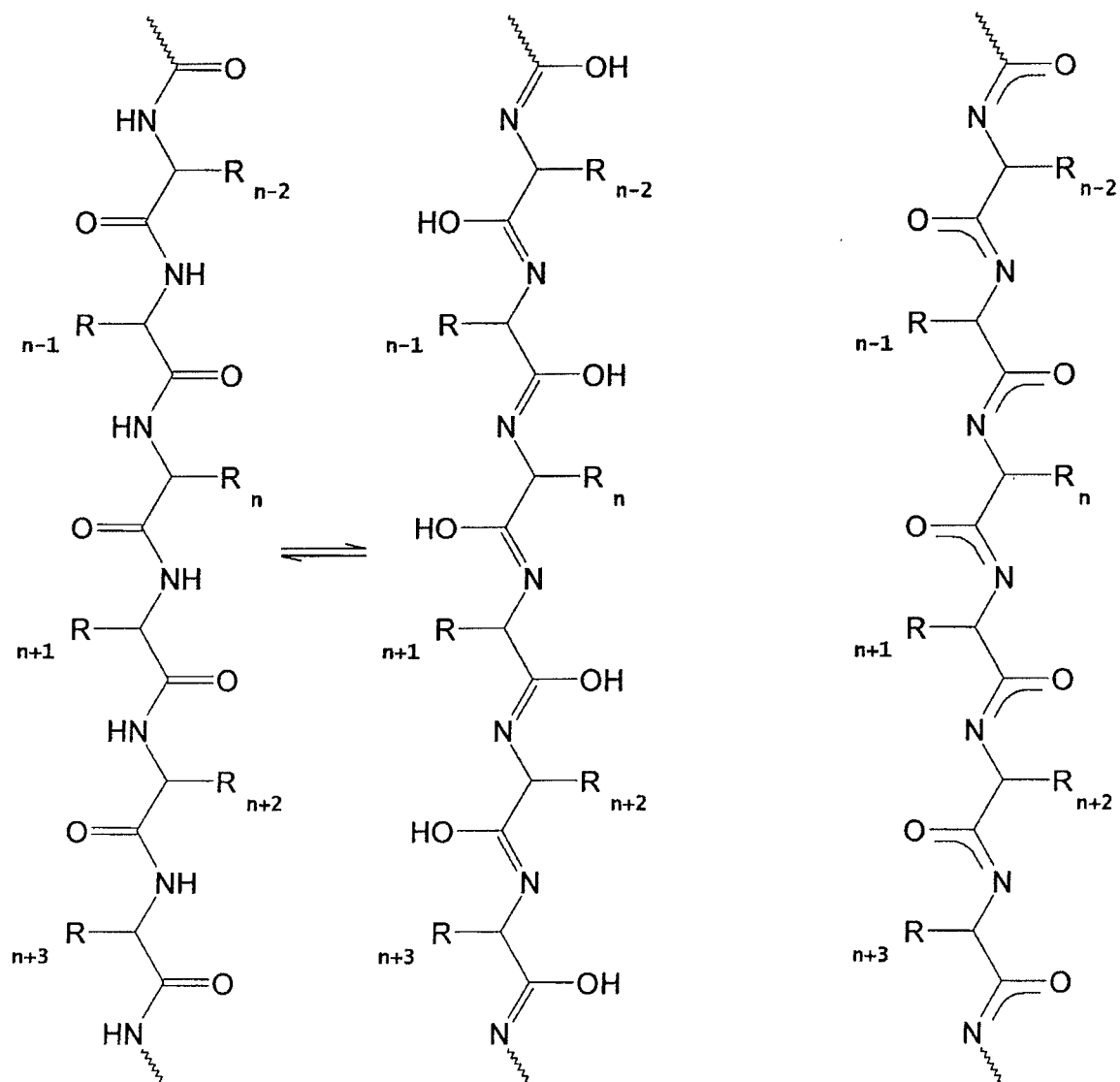


FIG. 3

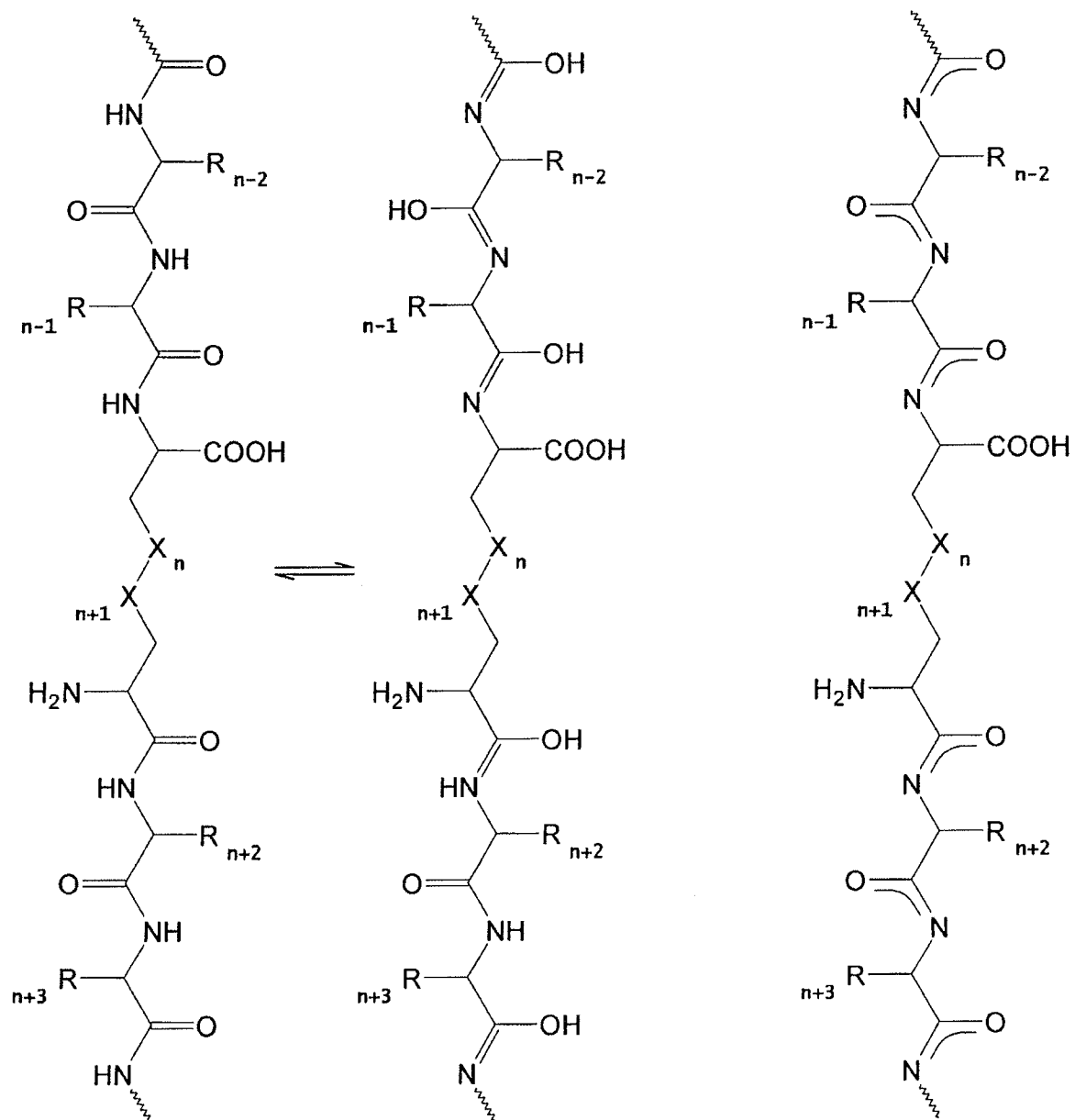


FIG. 4A

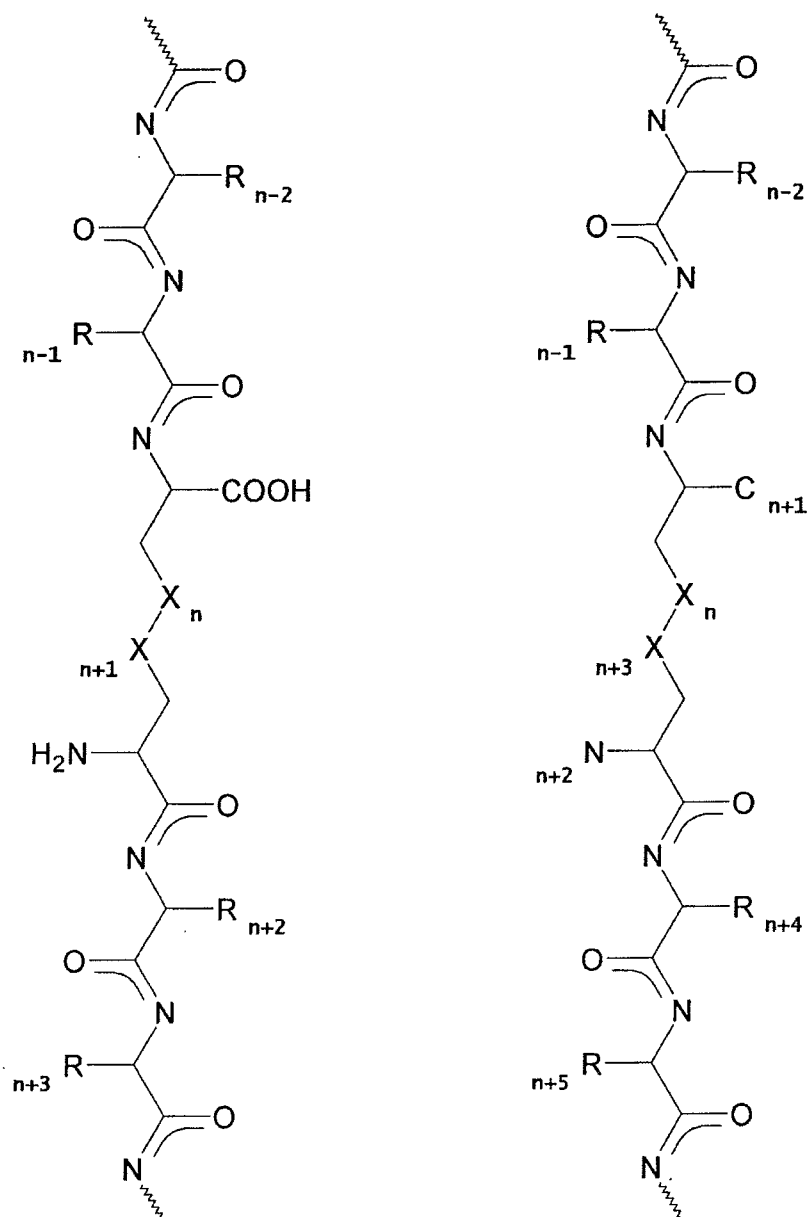


FIG. 4B

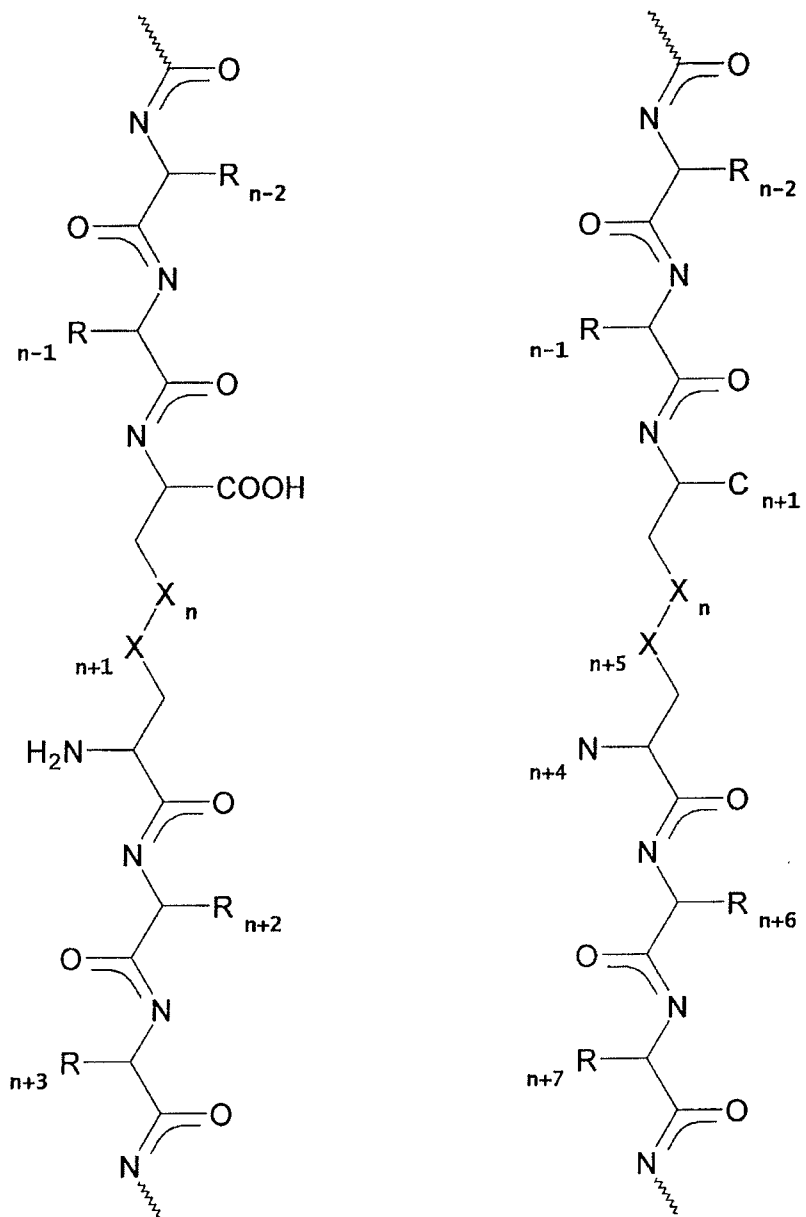


FIG. 4C

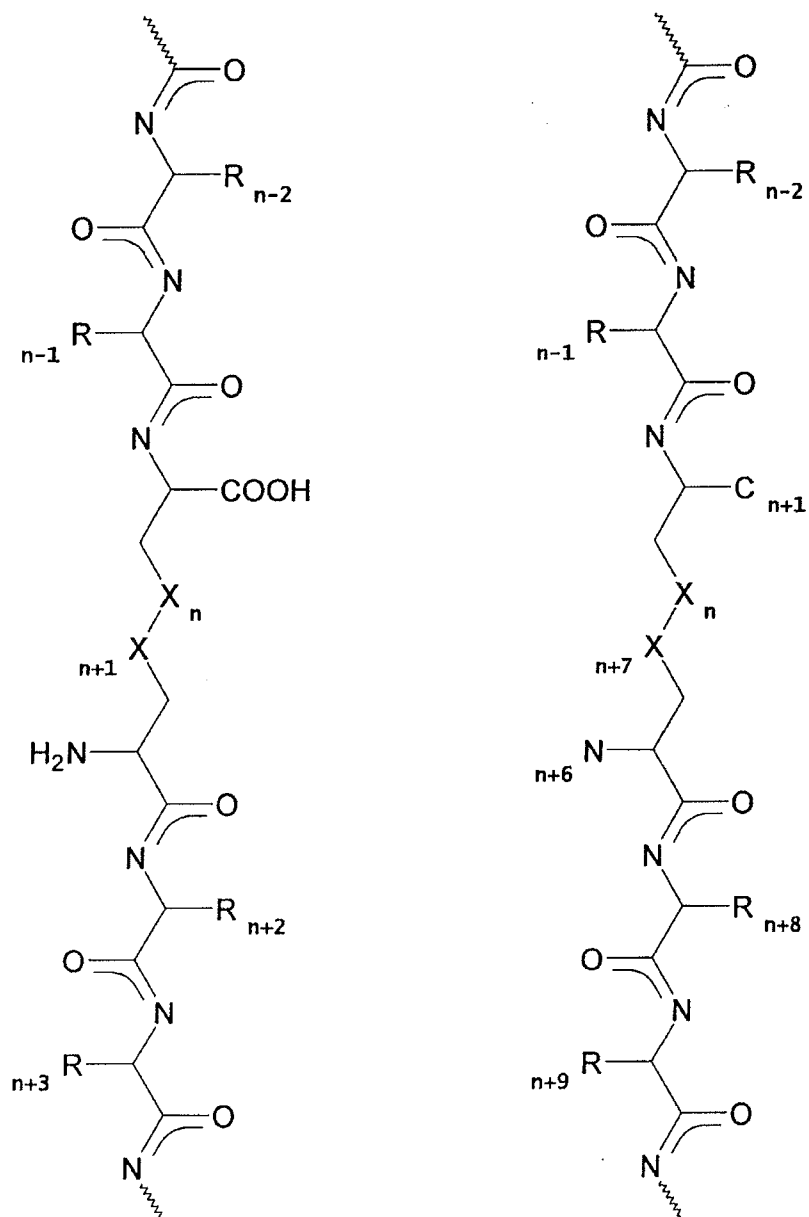


FIG. 4D

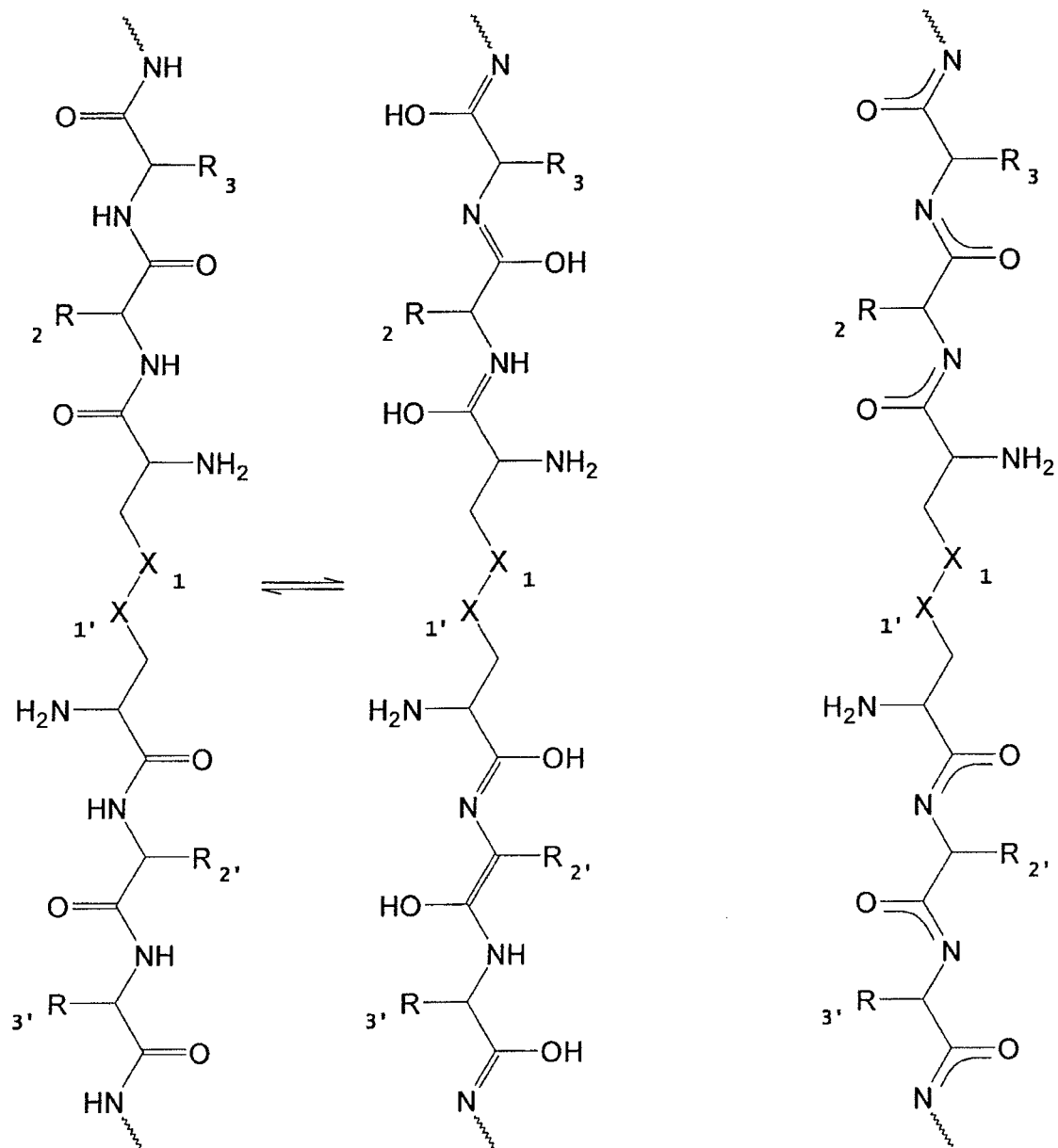


FIG. 5

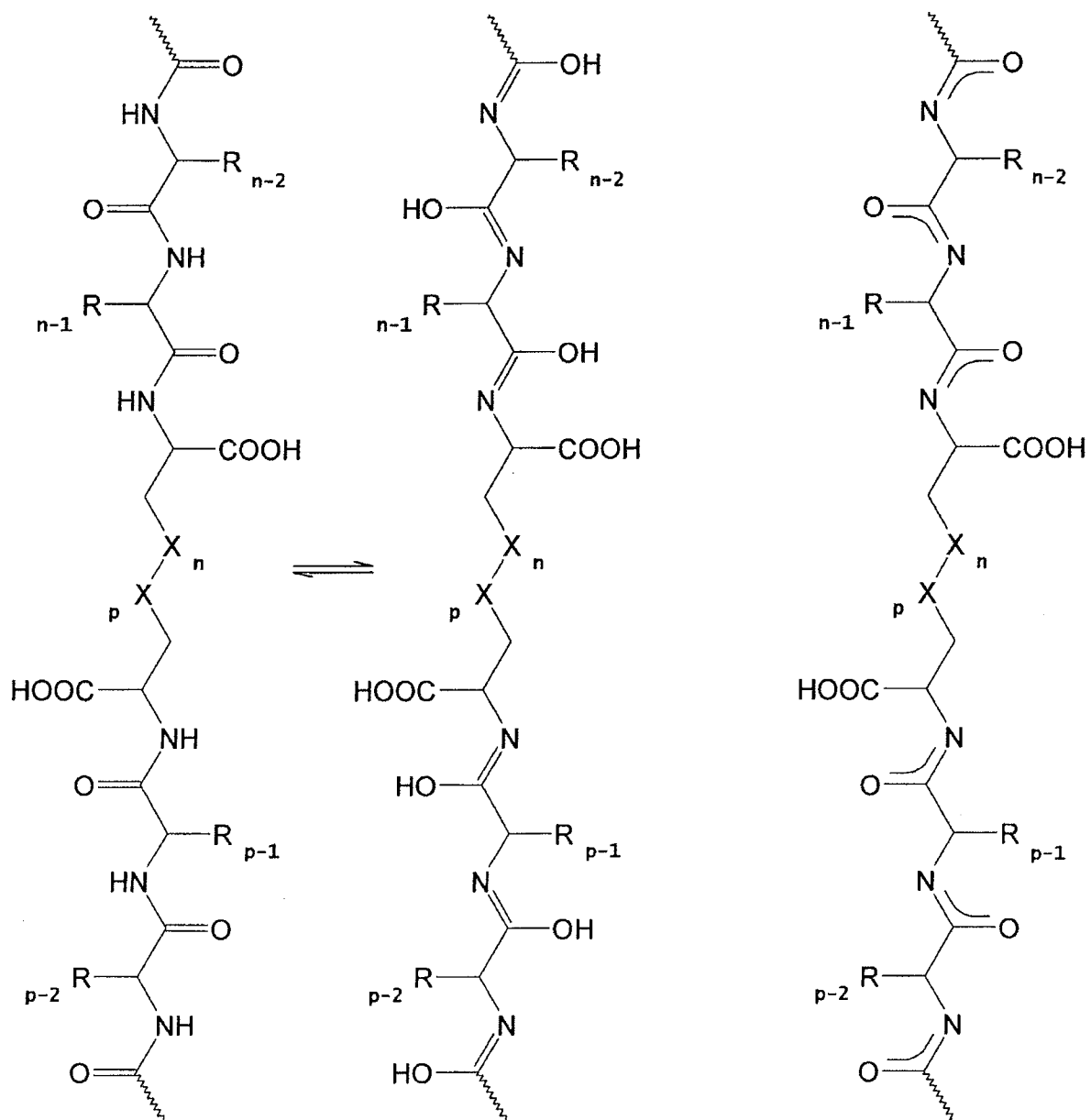


FIG. 6

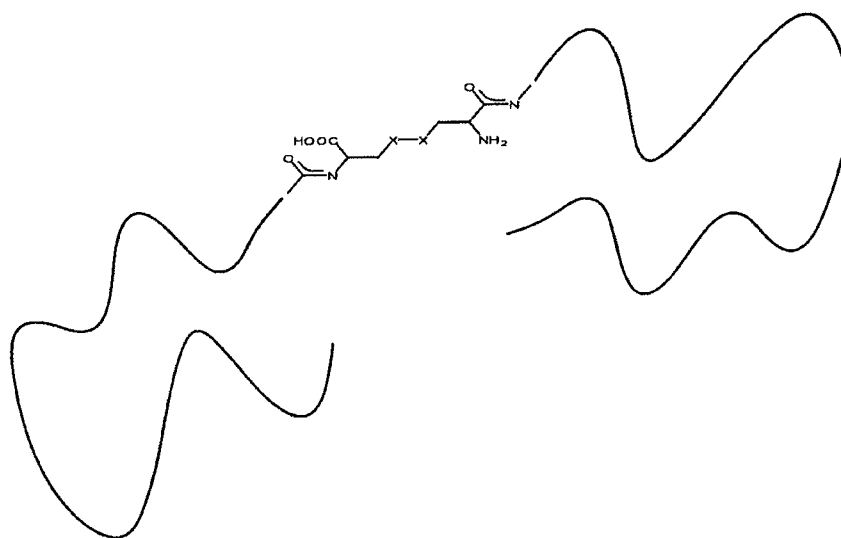


FIG. 7

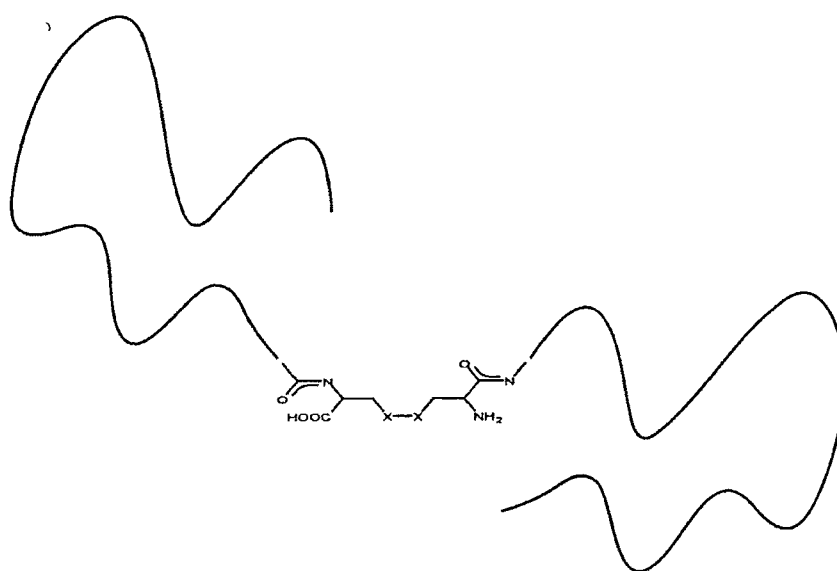


FIG. 8

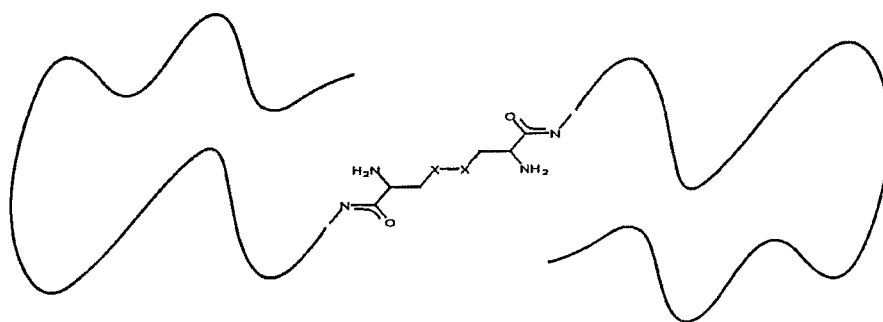


FIG. 9

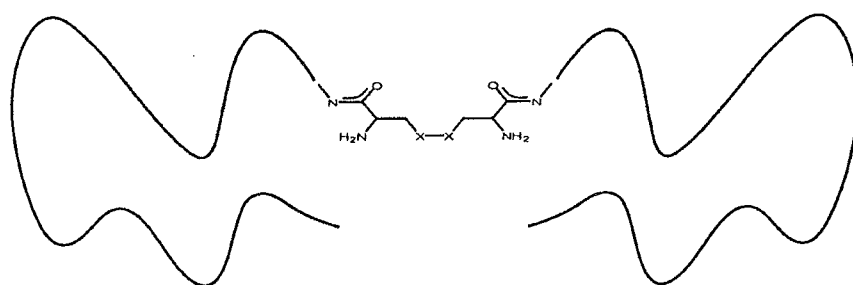


FIG. 10

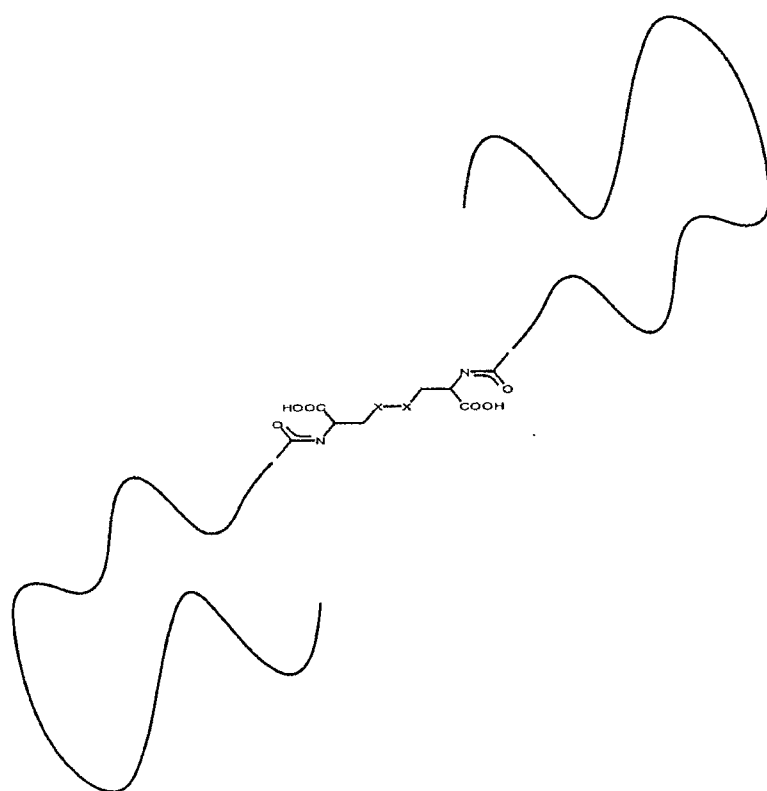


FIG. 11

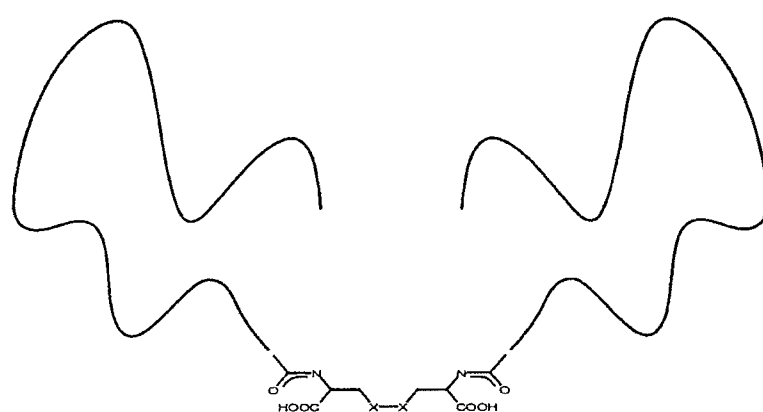


FIG. 12

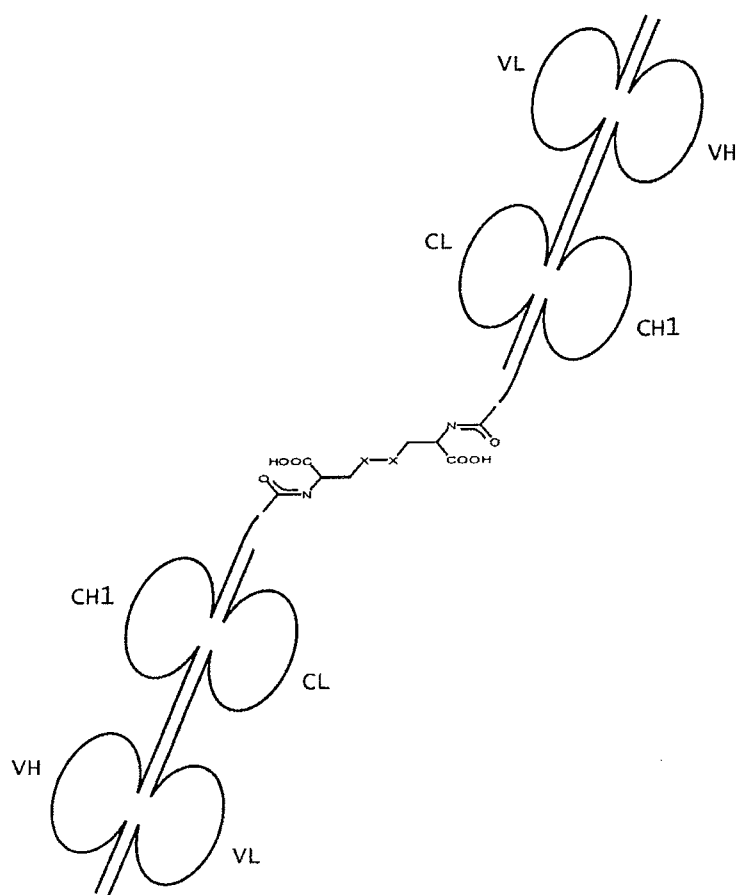


FIG. 13

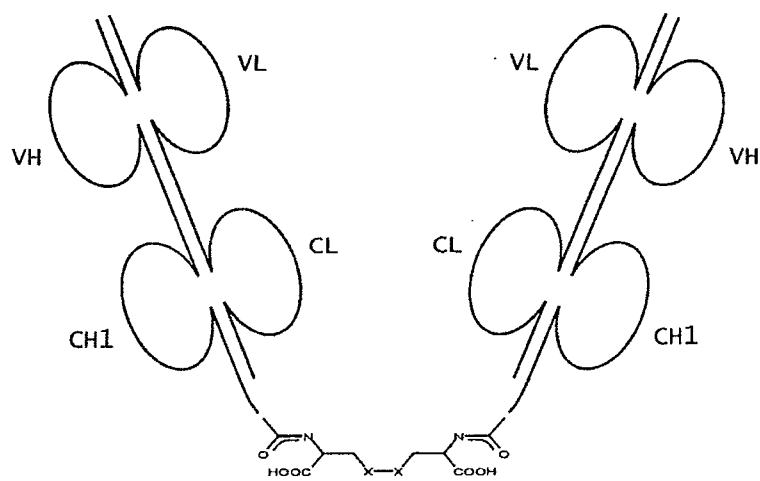


FIG. 14

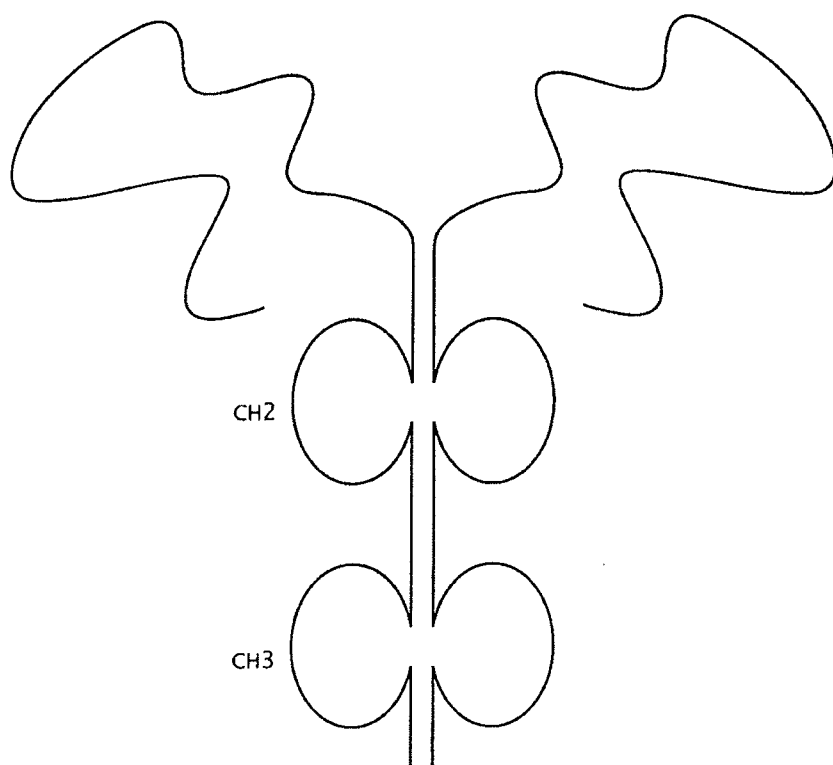


FIG. 15

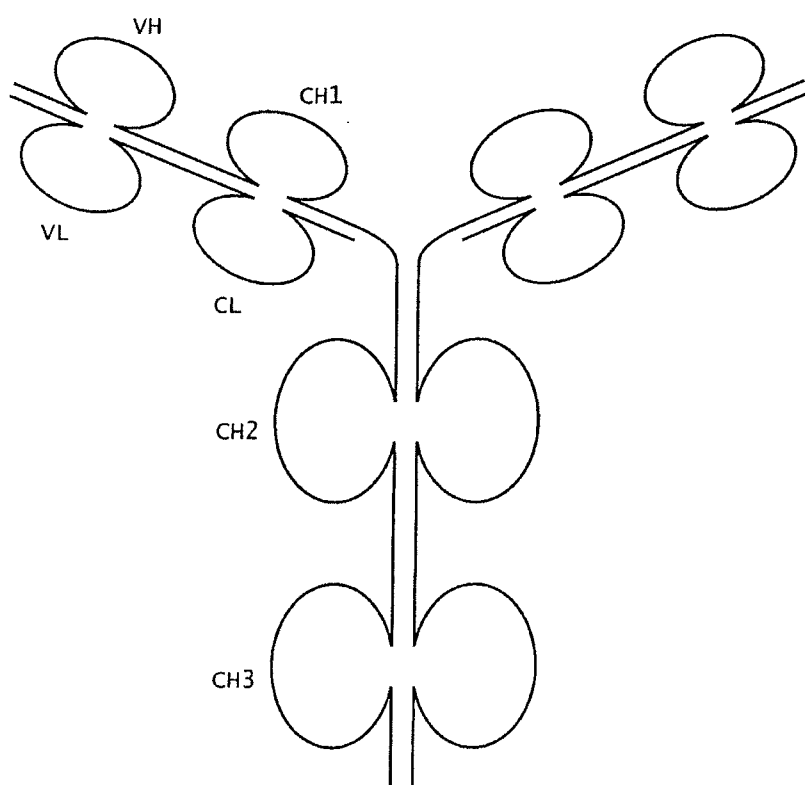


FIG. 16

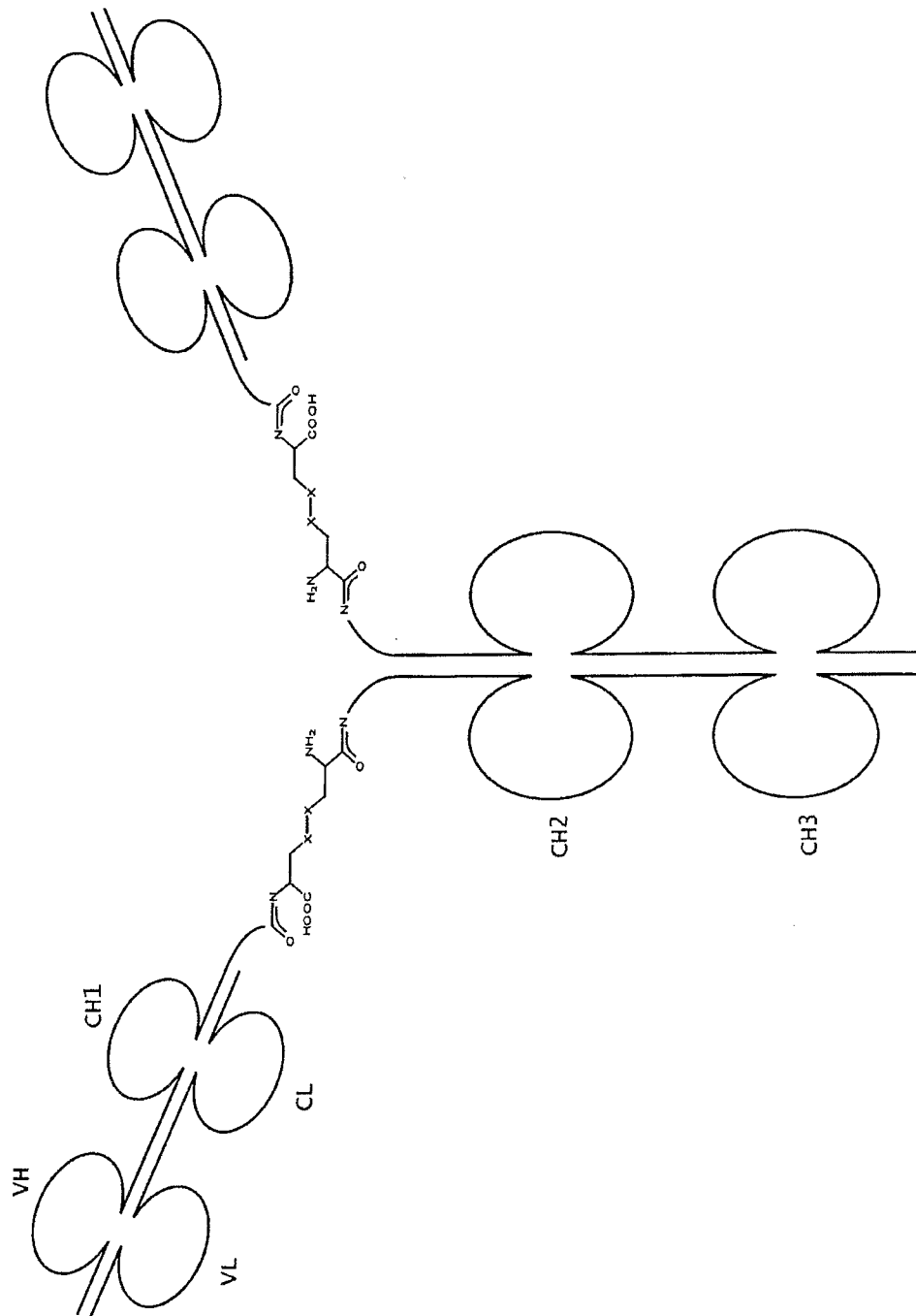


FIG. 17

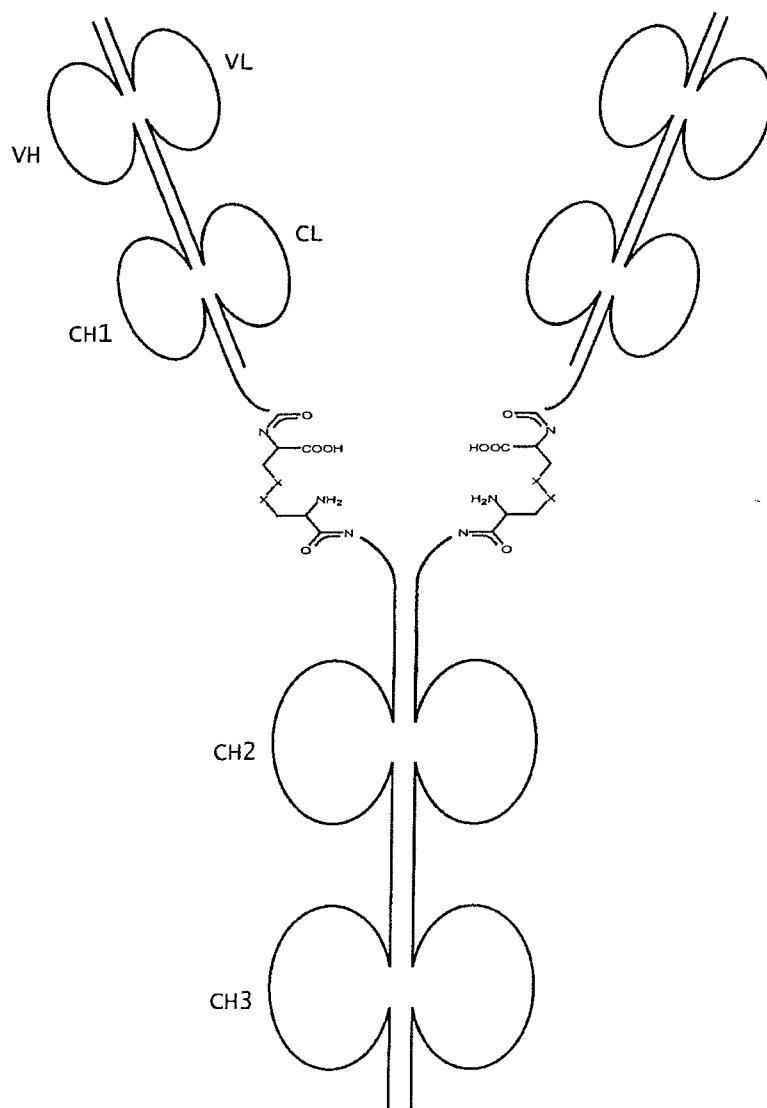


FIG. 18

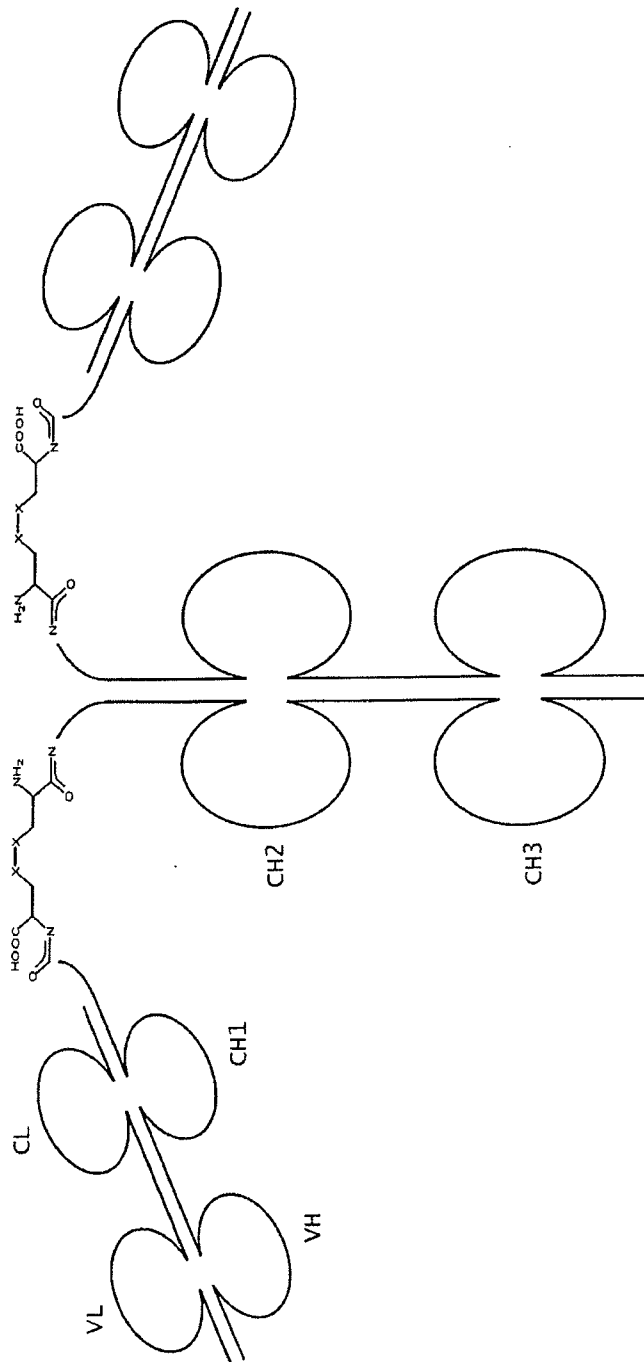


FIG. 19

FIG. 20

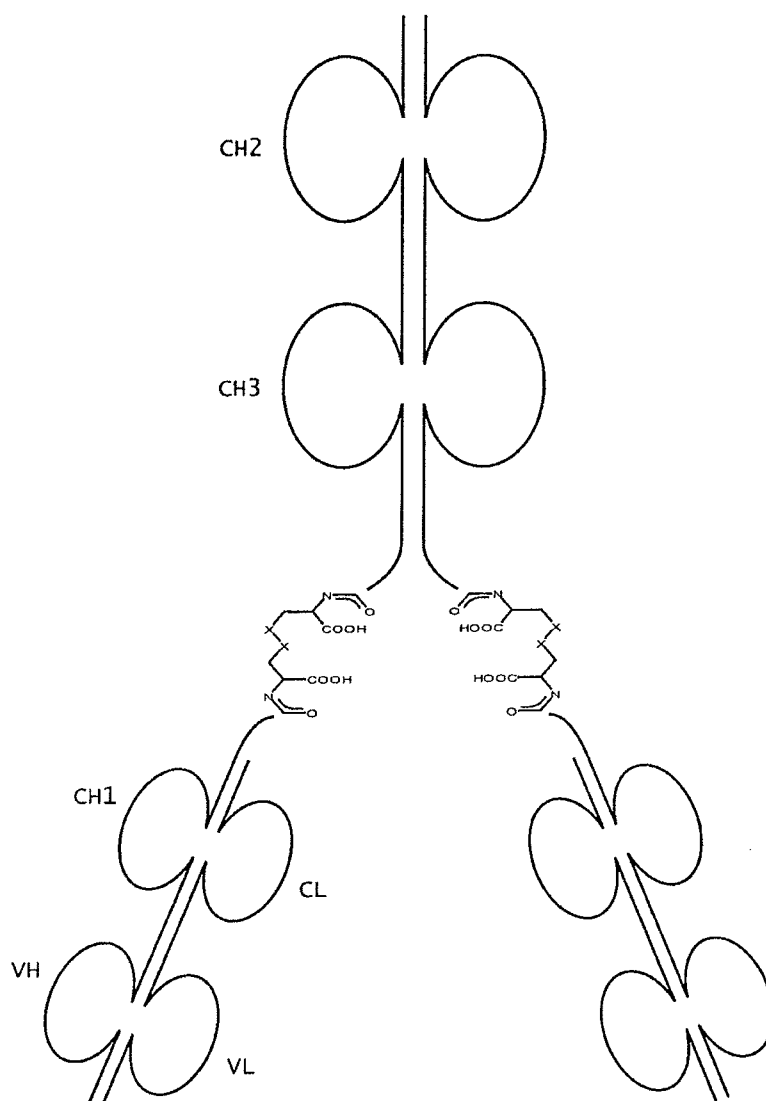


FIG. 21

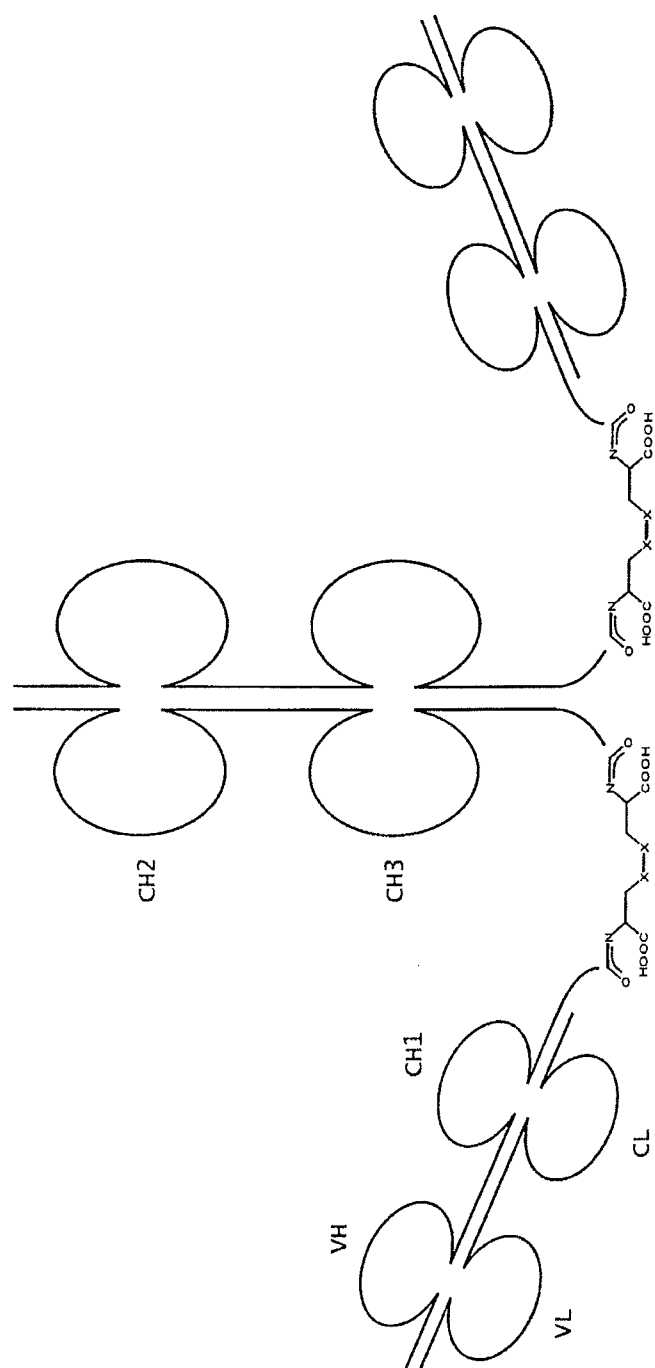


FIG. 22

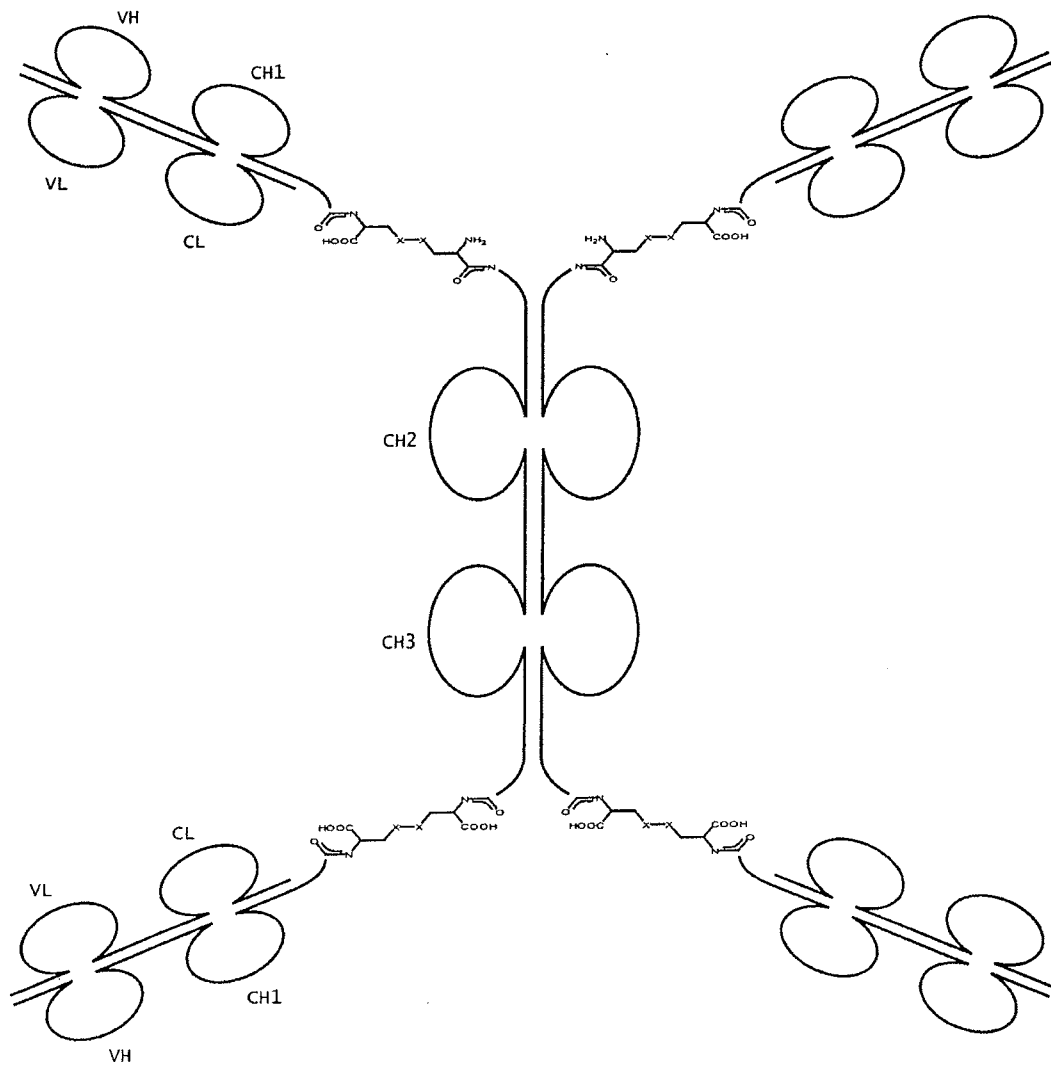


FIG. 23

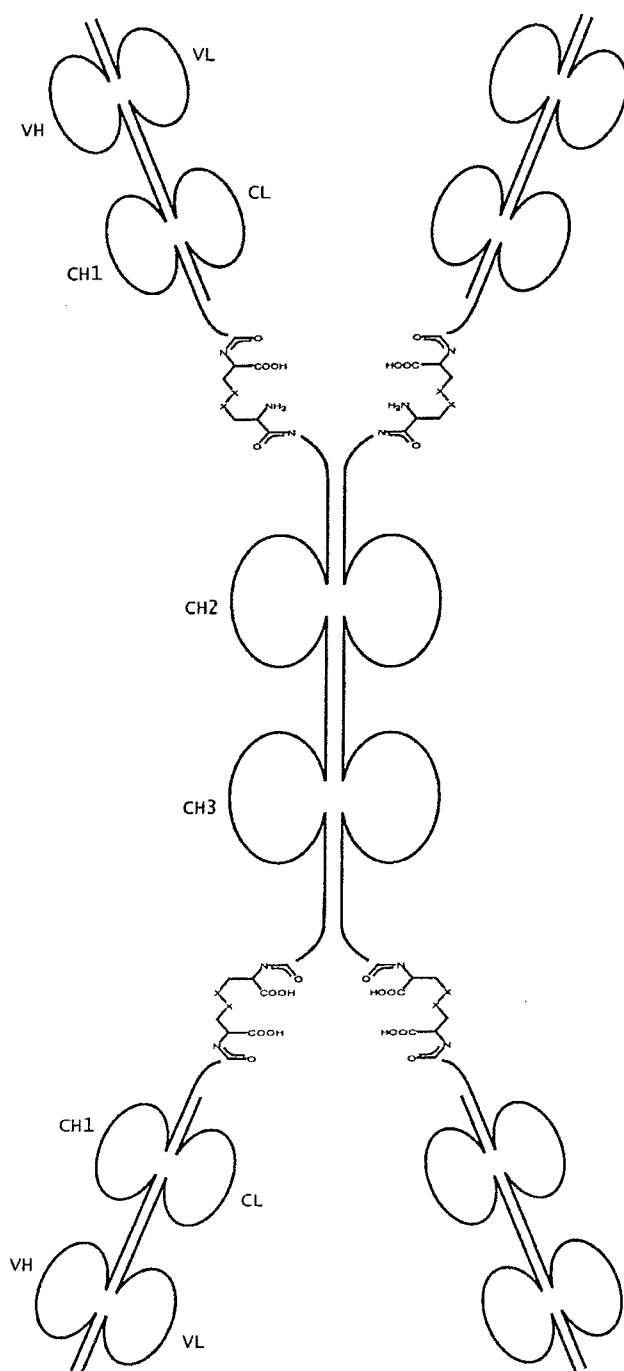


FIG. 24

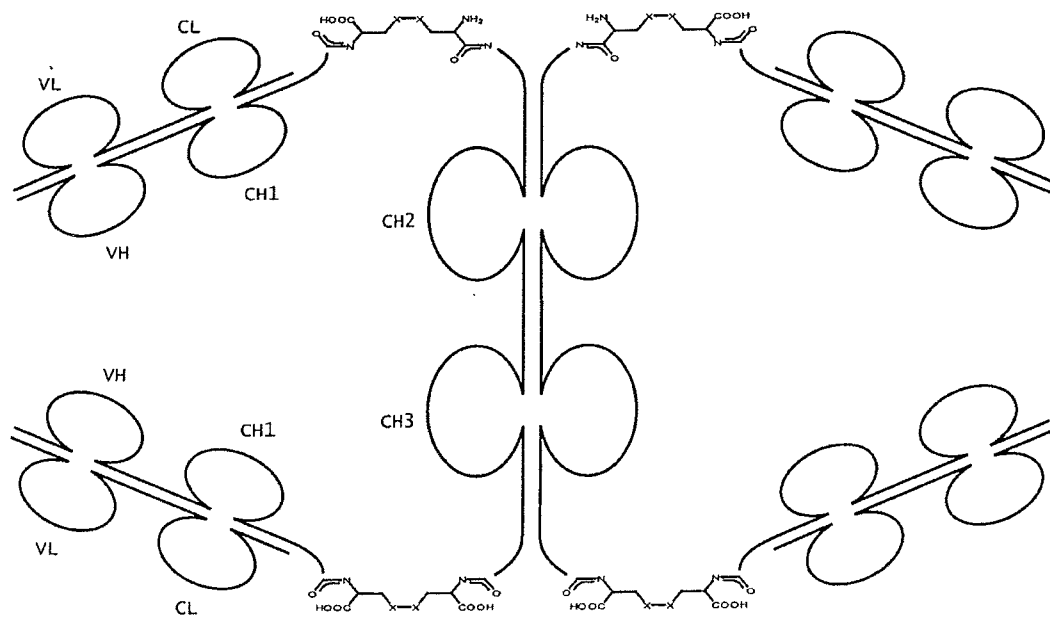


FIG. 25

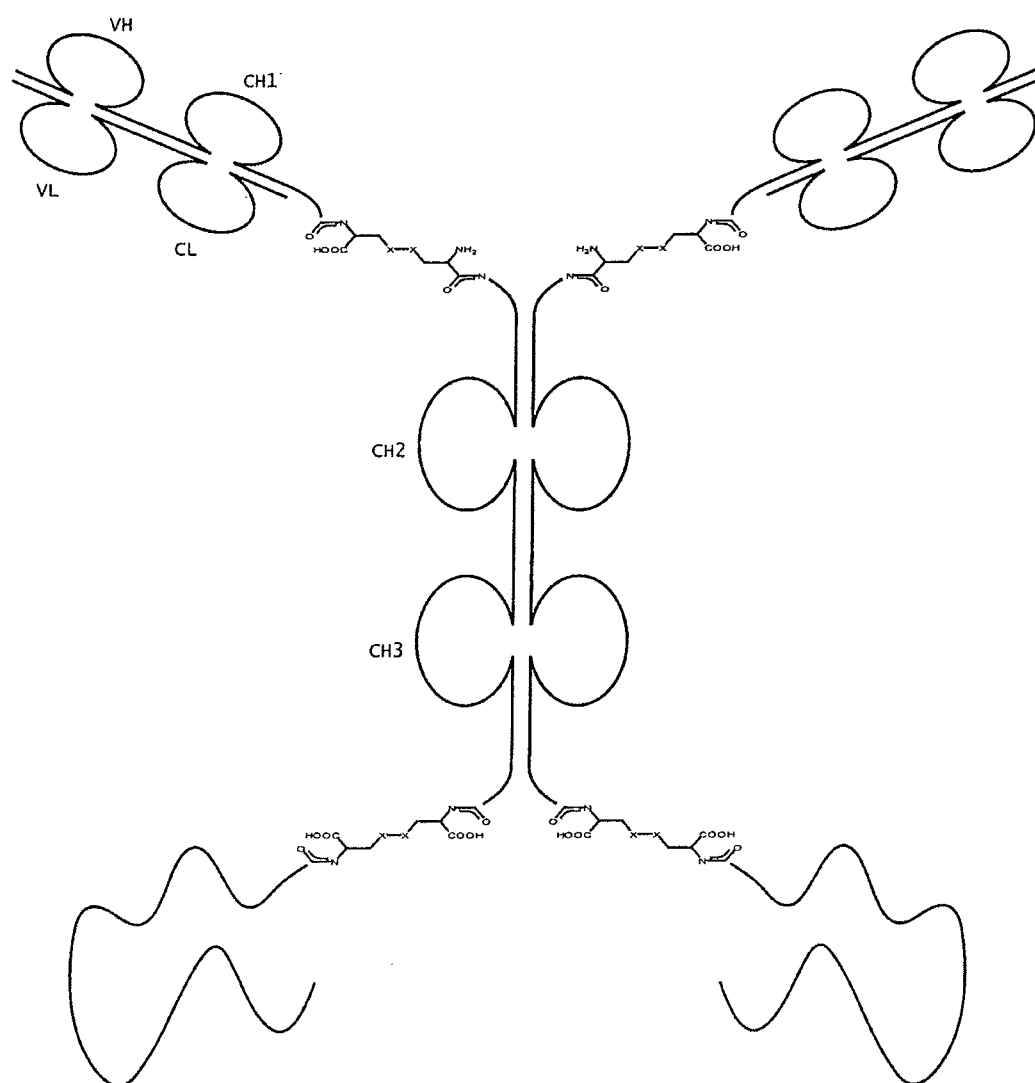


FIG. 26

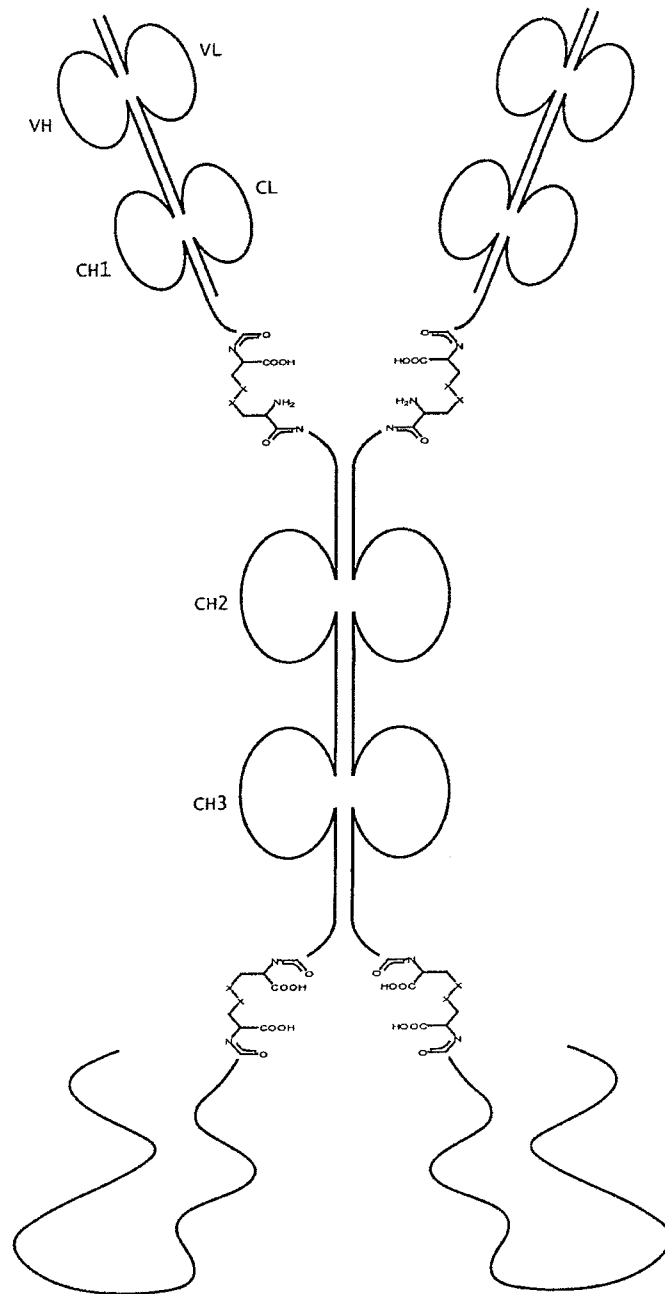


FIG. 27

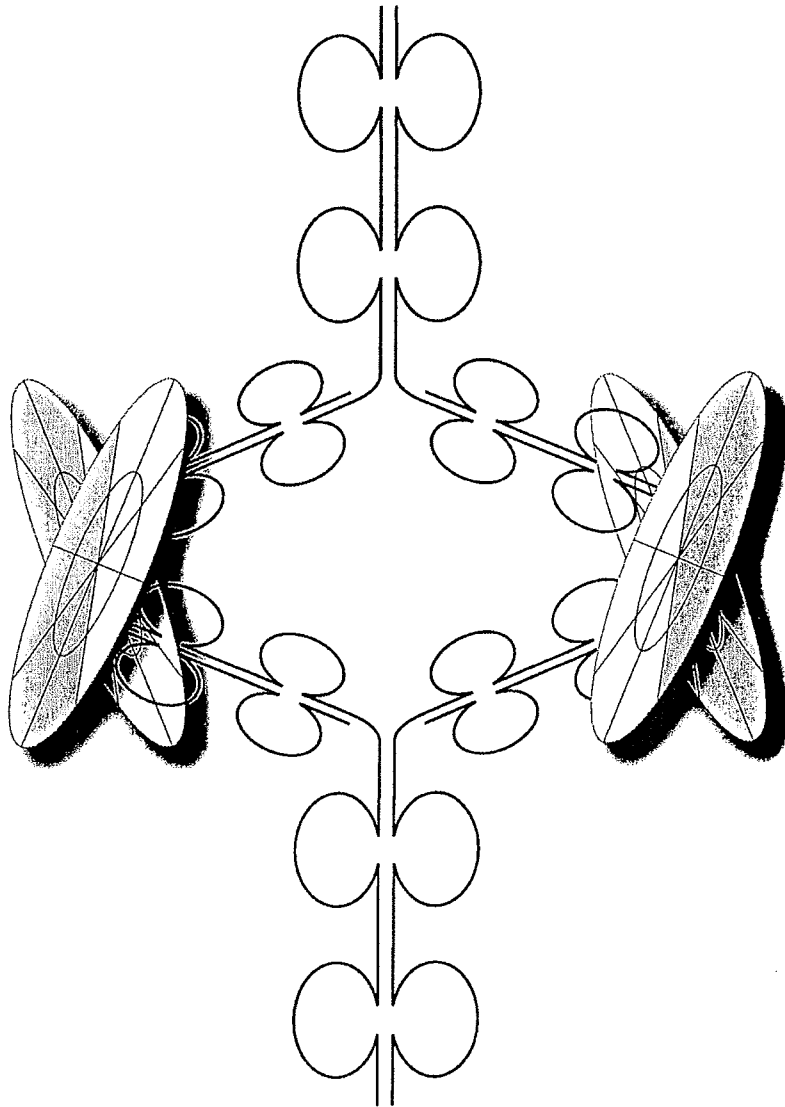


FIG. 29

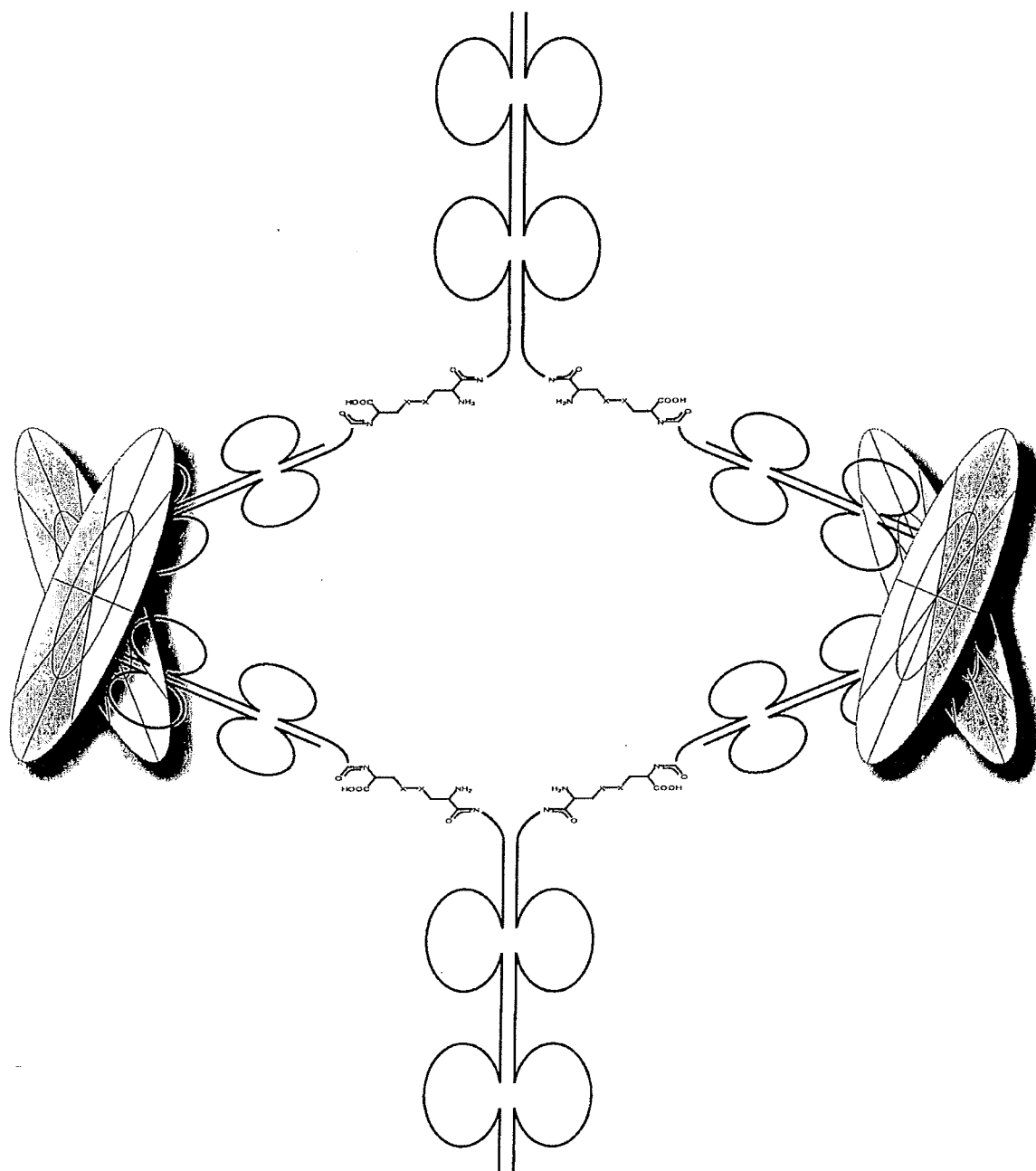


FIG. 30

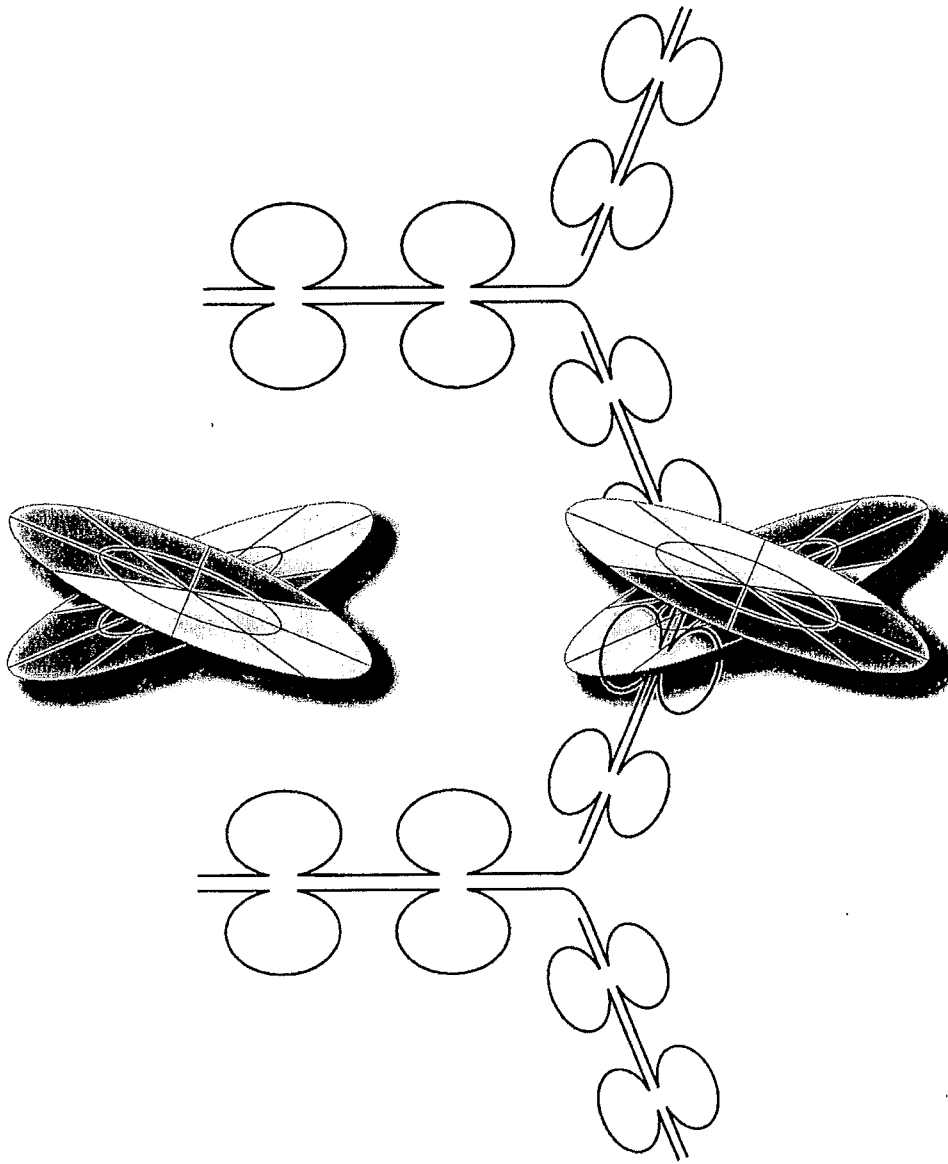


FIG. 31

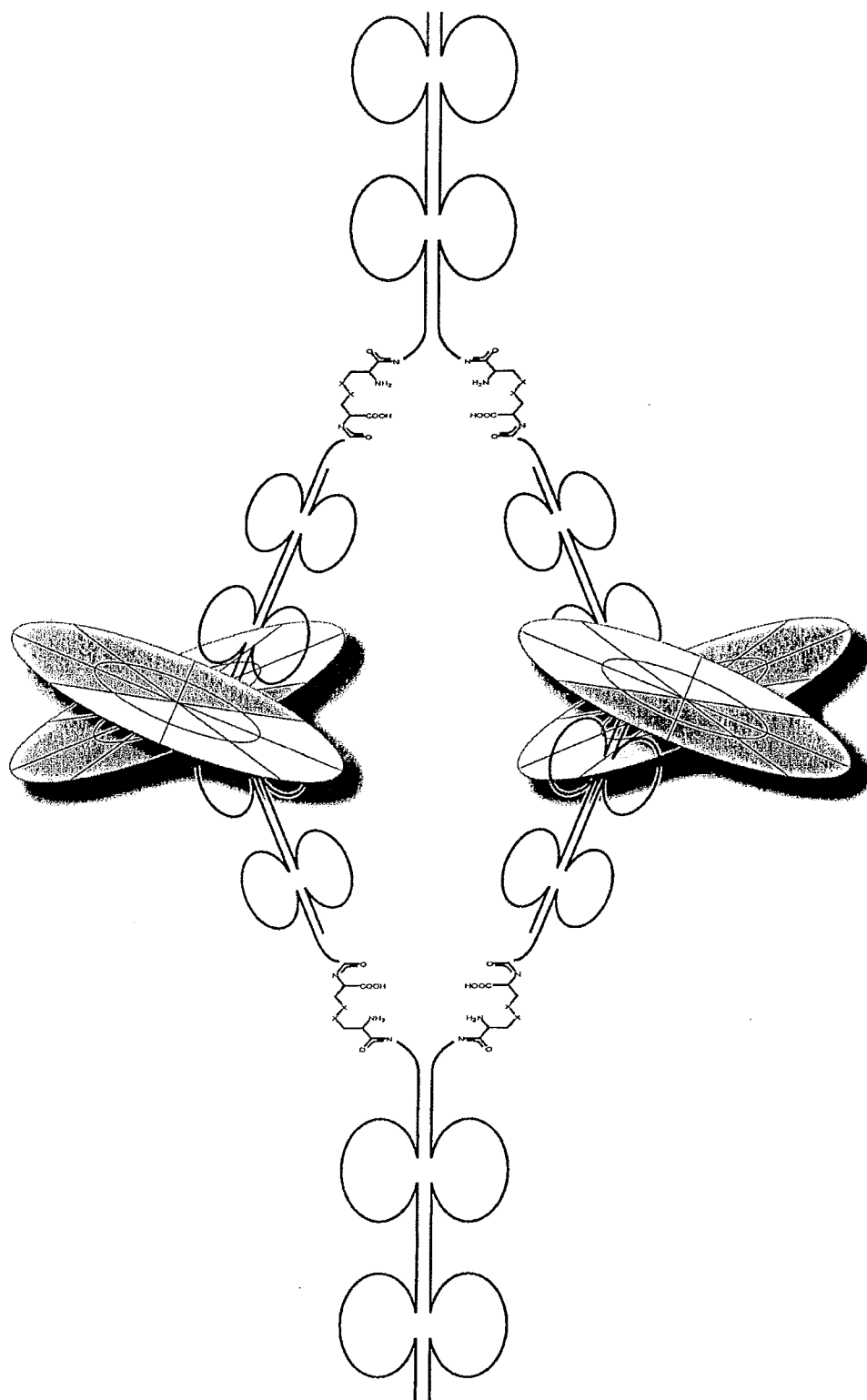


FIG. 32

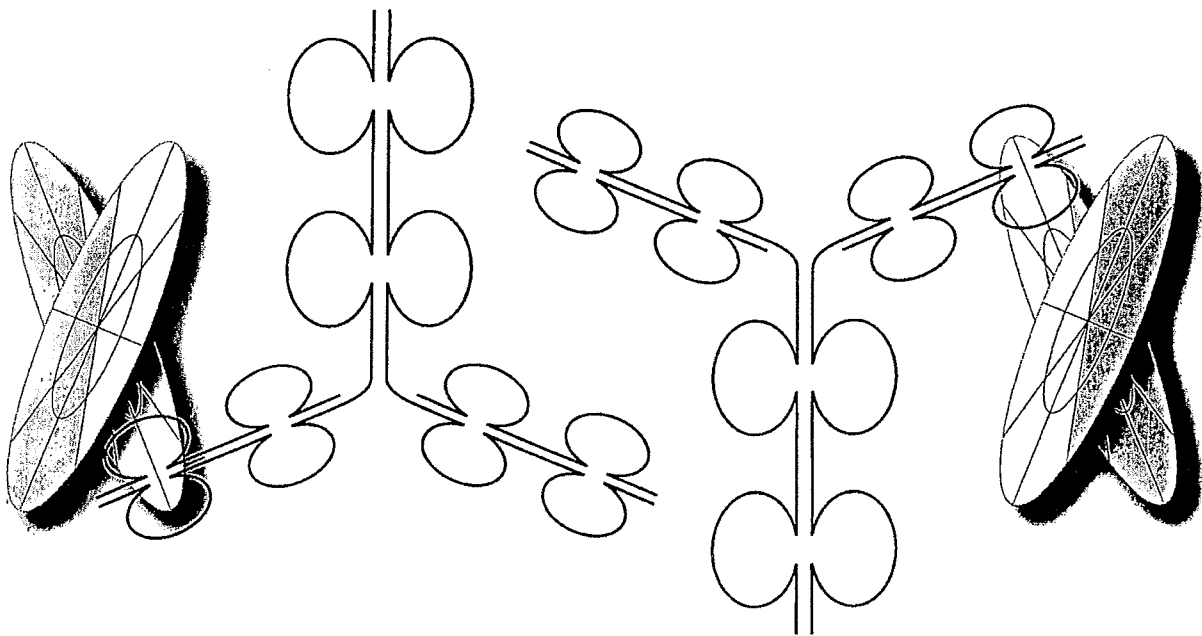


FIG. 33

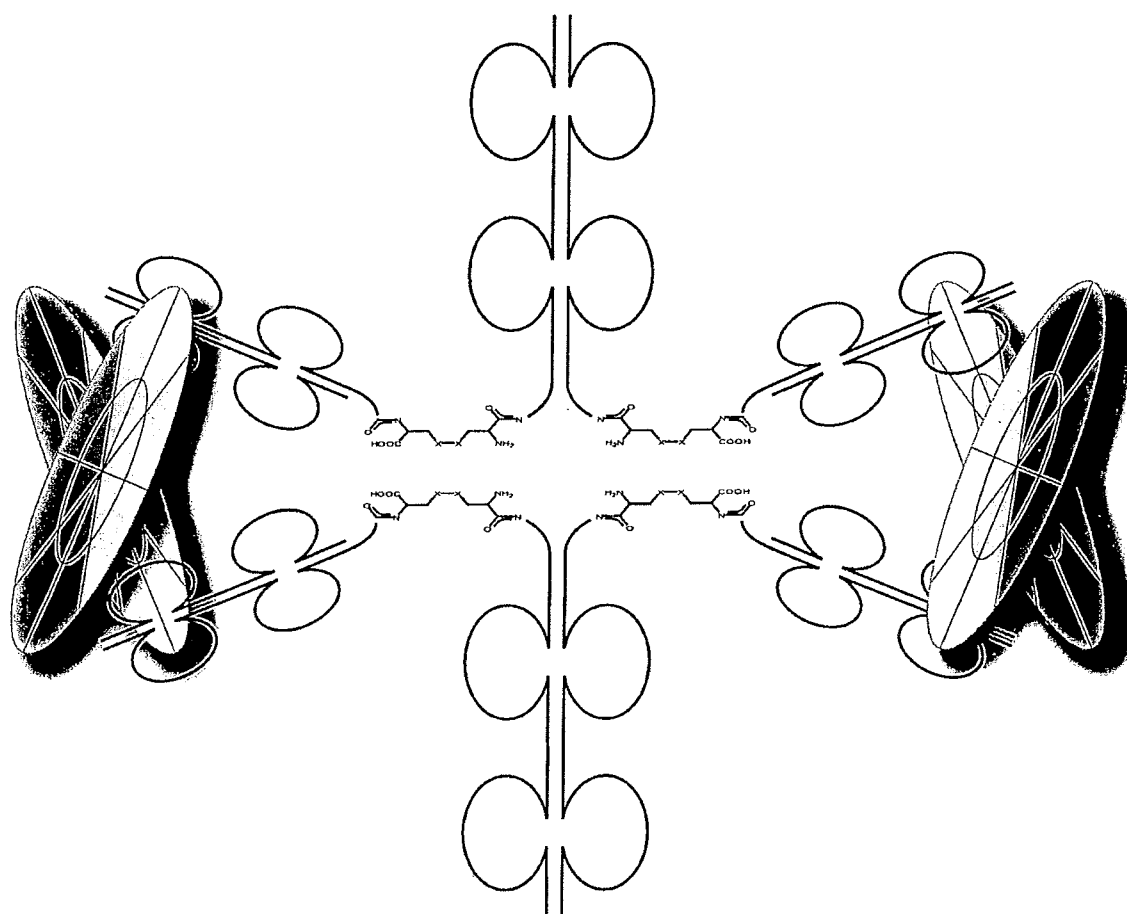


FIG. 34

IgG1 Fc N-terminal-S-terminus

(i) PRE-Fc

SHH	MLLLARCLLLVLVSSLLVCSGLA	-23
IFN	MALTFALLVALLVLSCKSSCSVG	-23
CETP	MLAATVLTLLALLGNAHA	-17
CDKTHTCPPCAPPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYV		60
DGVEVHNAKTPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSLSPGK		120
		180
		228

(ii) S-Fc

CDKTHTCPPCAPPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYV	60
DGVEVHNAKTPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSLSPGK	120
	180
	228

FIG. 35A

IgG2 Fc N-terminal-S-terminus

(i) PRE-Fc

SHH			
IFN			
CETP			
	MLLLARCLLLVSVSSLLVCSGLA	-23	
	MALTFALLVALLVLSCKSSCSVG	-23	
	MLAATVLTALLGNAHA	-17	
	CCVECPPCAPPVAGPSVFLFPPKPKDTLMISRTPEVTCVWVDVSHEDPEVQFNWYVDGV	60	
	EVHNAKTKPREEQFNSTFRVSVLTVVHQDWLNGKEYCKVSNKGLPAPIEKTISKTKGQ	120	
	PREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPPMLDSDG	180	
	SFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSLSPGK	225	

(ii) S-Fc

	CCVECPPCAPPVAGPSVFLFPPKPKDTLMISRTPEVTCVWVDVSHEDPEVQFNWYVDGV	60	
	EVHNAKTKPREEQFNSTFRVSVLTVVHQDWLNGKEYCKVSNKGLPAPIEKTISKTKGQ	120	
	PREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPPMLDSDG	180	
	SFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSLSPGK	225	

FIG. 35B

IgG3 Fc N-terminal-S-terminus

(i)	PRE-Fc		
	SHH	MLLLARCLLLVLVSSLLVCSGLA	-23
	IFN	MALTFALLVALLVLSCKSSCSVG	-23
	CETP	MLAATVLTLLALLGNAHA	-17
		CPRCPEPKSCDTPPPCPRCPEPKSCDTPPPCPRCPAPELLGGPSV	60
		FLFPKPKD T LMISRTPEVTCVVVDVSHEDPEVQFKWYVDGVEVHNAKTKPREEQFNSTF	120
		RVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKTKGQPREPQVYTLPPSREEMTK	180
		NQVSLTCLVKGFYPSDIAVEWESGQPENNYNTTPPM L SDGGSFFLYSKLTVDKSRWQQG	240
		NIFSCSVMH E ALHNRTQKSLSLSPGK	267
(ii)	S-Fc		
		CPRCPEPKSCDTPPPCPRCPEPKSCDTPPPCPRCPAPELLGGPSV	60
		FLFPKPKD T LMISRTPEVTCVVVDVSHEDPEVQFKWYVDGVEVHNAKTKPREEQFNSTF	120
		RVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKTKGQPREPQVYTLPPSREEMTK	180
		NQVSLTCLVKGFYPSDIAVEWESGQPENNYNTTPPM L SDGGSFFLYSKLTVDKSRWQQG	240
		NIFSCSVMH E ALHNRTQKSLSLSPGK	267

FIG. 35C

IgG4 Fc N-terminal-S-terminus

(i) PRE-Fc

SHH	MLLLARCLLLVLVSSLLVCSGLA	-23
IFN	MALTFALLVALLVLSCKSSCSVG	-23
CETP	MLAATVLTLLALGNAHA	-17
CPSCPAPEFLGGPSVFLFPKPKD	TLMI	SRTP
NAKTKPREEQFNSTYRWVS	VLTVLHQDWL	NGKEYCKKVS
PQVYTLPPSQEEMTKNQVSL	TCLVKGFY	PSDIAVEWES
LYSRLTVDKSRWQEGNVFSCSV	MHEALHNHYT	QKSLSL
		SLGK
		60
		120
		180
		222

(ii) S-Fc

CPSCPAPEFLGGPSVFLFPKPKD	TLMI	SRTP
NAKTKPREEQFNSTYRWVS	VLTVLHQDWL	NGKEYCKKVS
PQVYTLPPSQEEMTKNQVSL	TCLVKGFY	PSDIAVEWES
LYSRLTVDKSRWQEGNVFSCSV	MHEALHNHYT	QKSLSL
		SLGK
		60
		120
		180
		222

FIG. 35D

Fc N-terminal-X-terminus

(i) PRE-Fc

SHH	MLLARCLLLVLVSSLLVCSGLA	-23
IFNA	MALTFALLVALLVLSCKSSCSVG	-23
CETP	MLAATVLTLLLGNAHA	-17
CPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYVDGVEVH		60
NAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAKGQPRE		120
PQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFF		180
LYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK		222

(ii) S-Fc

CPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYVDGVEVH	60
NAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAKGQPRE	120
PQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFF	180
LYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	222

(iii) X-Fc

XDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYV	60
DGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKA	120
KGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLD	180
SDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	228

FIG. 36A

Fc N-terminal-X-terminus

(i) PRE-Fc

SHH			
IFNA	MLLLARCLLLVLVSSLLVCSGLA	-23	
CETP	MALTFALLVALLVLSCKSSCSVG	-23	
	MLAATVLTALLGNAHA	-17	
CPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVAVDVSHEDPEVKFNWYVDGVEVHNAK		60	
TKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAKGQPREPQV		120	
YTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFFLYS		180	
KLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK		219	

(ii) S-Fc

CPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVAVDVSHEDPEVKFNWYVDGVEVHNAK	60
TKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAKGQPREPQV	120
YTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFFLYS	180
KLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	219

(iii) X-Fc

XPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVAVDVSHEDPEVKFNWYVDGVEVH	60
NAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAKGQPRE	120
PQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFF	180
LYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	222

FIG. 36B

Fc C-terminal-X-terminus

(i) PRE-FC-AUTOCLEAVAGE

CD2 MSFPCKFVASFLLIFNVSSKGAVS -24
 CD4 MNRGVPRHLLLVQLALLPAATQG -25
 KTHTCPPCAPPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDG 60
 VEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAKG 120
 QPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSD 180
 GSFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSLSPQLQEESCAEAQDGEL 240
 DGCVSGDTIVMTSGGPRTVAELEGKPTALIRGSGYPCPSGFFRTCERDVYDLRTREGHC 300
 LRLTHDHRVLMDDGGLWRAAGELERGDRLVMDDAAGEFPALATFRGLRGAGRQDVYDAT 360
 VYGASAFANGFIVHACGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQLVTYNGKTYKCL 420
 QPHTSLAGWEPSPALWQLQ 441

(ii)

FC-AUTOCLEAVAGE

KTHTCPPCAPPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDG 60
 VEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAKG 120
 QPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSD 180
 GSFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSLSPQLQEESCAEAQDGEL 240
 DGCVSGDTIVMTSGGPRTVAELEGKPTALIRGSGYPCPSGFFRTCERDVYDLRTREGHC 300
 LRLTHDHRVLMDDGGLWRAAGELERGDRLVMDDAAGEFPALATFRGLRGAGRQDVYDAT 360
 VYGASAFANGFIVHACGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQLVTYNGKTYKCL 420
 QPHTSLAGWEPSPALWQLQ 441

(iii)

FC-THIOESTER

KTHTCPPCAPPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDG 60
 VEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAKG 120
 QPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSD 180
 GSFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSLSPQLQEESCAEAQDGEL 240
 DX 242

(iv)

FC-X

KTHTCPPCAPPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDG 60
 VEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAKG 120
 QPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSD 180
 GSFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSLSPQLQEESCAEAQDGEL 240
 DGX 243

FIG. 37A

Fc C-terminal γ -S-terminus

(i) PRE-Fc

CD2	MSFPCKFVASFLLIFNVSSKGAVS	-24
CD4	MNRGVPRHLLLVQLALLPAATQG	-25
	KTHTCPPCPAPPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDG	60
	VEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAKG	120
	QPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSD	180
	GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPQLQEESC	232

(ii) Fc-S

	KTHTCPPCPAPPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDG	60
	VEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAKG	120
	QPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSD	180
	GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPQLQEESC	232

(i) PRE-FC-AUTOCLEAVAGE

SHH	MLLLARCLLLVLVSSLLVCSGLA	-23
IFN	MALTFALLVALLVLSCKSSCVG	-23
CETP	MLAATVLTLLALLGNAHA	-17
CDKTHTCPPCAPPELLGGPSVFLFPPKPKDTLMISRTPEVTCVAVDVSHEDPEVKFNWYV		60
DGVEVHNAKTKPREEQNSTYRVSVLTVLHQDLNKGKEYCKVSNKALPAPIEKTISKA		120
KGQPREPQVYVTLPPSRDELTKNQVSLTCLVKGFYPSDIAVWESNGQPENNYKTTPPVLD		180
SDGSFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSLSPQLLEESCAEAQDG		240
ELDGCVSGDTIVMTSGGPRTVAEEGKPFATALIRGSGYPCPSGFFRTCERDVIYDLRTREG		300
HCLRLTHDHRVLMVDGGLWEWAAGELERGLVMDDAAGFEFALATFRGLRGAGRQDVYD		360
ATVYGASAFANGFIVHACGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQLVTYNGKTYK		420
CLQPHTSLAGWEPNSVPALWQLQ		443

(ii) S-FC-AUTOCLEAVAGE

CDKTHTCPPCAPELLGGPSVFLFPKPKDTLMISRTPEVTCVWVDVSHEDPEVKFNWYV 60
 DGEVHNAKTKPREEQYNSTYRVSVLTVHLQDWLNGKEYCKVSNKALPAPIEKTISKA 120
 KGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLD 180
 SDGSFFLYSKLTVDKSRWQQGNVFCSMHEALHNYHTQKLSLSPELQLEESCAEAQDG 240
 ELDCGVSGDTHVTMTSGGPRTVAELEGKPTALIRGSGYPCPSGFFRTCDERDVYDLRTREG 300
 HCLRLTHDHRVLMVDGGLWEAAGELERGDRLVMDDAAGEFPALATFRGLRGAGRQDVYD 360
 ATVYGASAFTHANGFIVHACGGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQLVTYNGKTYK 420
 CLQPHTSLAGWEPNSVPALWQLQ 443

FIG. 38A

Fc N-terminal-S-terminus AND C-terminal-X-terminus (cont'd)

(iii) S-Fc-THIOESTER

CDKTHTCPPCPAPELLGGPSVFLFPPKPKD	60
TLMI	120
SRTP	180
EVTCVVDVSHEDPEVKFNWYV	240
ELDX	244

(iv) S-Fc-X

CDKTHTCPPCPAPELLGGPSVFLFPPKPKD	60
TLMI	120
SRTP	180
EVTCVVDVSHEDPEVKFNWYV	240
ELDGX	245

FIG. 38B

Fc N-terminal-X-terminus AND C-terminal-X-terminus

(i) PRE-Fc-AUTOCLEAVAGE

SHH	MLLLARCLLLVLVSSLLVCSGLA	-23
IFN	MALTFALLVALLVLSCKSSCSVG	-23
CETP	MLAATVLTLLALLGNAHA	-17
	CPPCPAPELLGGPSVFLFPPKPKD	60
	TLMISRTPEVTCVWDVSHEDPEVKFNWYVDGVEVH	120
	NAKTKPREEQNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAKGQPRE	180
	PQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFF	240
	LYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSLSPQLQEESCAEAQDGELDGC	300
	VSFTTIVMTSGGPRITVAEELEGGPKFTALIRGSGYPCPSGFFRTTCERDVYDLRTREGHCLRLT	360
	HDHRLVMDGGLEWRAAGELERGDRLVMDDAAGEFPALATFRGLRGAGRQDVYDATVYGA	420
	SAFTANGFIVHACGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQLVTYNGKTYKCLQPHT	437
	SLAGWEPSNVPALWQLQ	

(ii) S-Fc-AUTOCLEAVAGE

	CPPCPAPELLGGPSVFLFPPKPKD	60
	TLMISRTPEVTCVWDVSHEDPEVKFNWYVDGVEVH	120
	NAKTKPREEQNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAKGQPRE	180
	PQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFF	240
	LYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSLSPQLQEESCAEAQDGELDGC	300
	VSFTTIVMTSGGPRITVAEELEGGPKFTALIRGSGYPCPSGFFRTTCERDVYDLRTREGHCLRLT	360
	HDHRLVMDGGLEWRAAGELERGDRLVMDDAAGEFPALATFRGLRGAGRQDVYDATVYGA	420
	SAFTANGFIVHACGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQLVTYNGKTYKCLQPHT	437
	SLAGWEPSNVPALWQLQ	

FIG. 39A

Fc N-terminal-X-terminus AND C-terminal-X-terminus (cont'd)

(iii) X-FC-AUTOCLEAVAGE

XDKTHTCPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYV 60
 DGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISK 120
 KGQPREPVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLD 180
 SDGSFFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSPELQLEESCAEAQDG 240
 ELDGCVSGDTIVMTSGGPRTVAELEGKPFETALIRGSGYPCPSGFFRTCDVDYDLRTREG 300
 HCLRLTHDHRVLMDDGGLWRAAGELERGDRLVMDDAAGEFPALATFRGLRGAGRQDVVD 360
 ATVYGASAFANGFIVHACGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQLVTYNGKTYK 420
 CLQPHTSLAGWEPNSVPALWQLQ 443

(iv) X-FC-THIOESTER

XDKTHTCPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYV 60
 DGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISK 120
 KGQPREPVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLD 180
 SDGSFFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSPELQLEESCAEAQDG 240
 ELDX 244

(v) X-FC-X

XDKTHTCPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYV 60
 DGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISK 120
 KGQPREPVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLD 180
 SDGSFFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSPELQLEESCAEAQDG 240
 ELDGX 245

FIG. 39B

CD4 C-terminal-X-terminus

(i) PRE-CD4-AUTOCLEAVAGE

KKVVLGKKGDTVELTCTASQKKSQIFHWKNSNQIKILGNQGSFLTKGPSKLNDRADSRRS
LWDQGNFPLIIKNLKIEDSDTYICEVEDQKEEVQLLVFGLTANSDTHLLQGQSLTLTLES
PPGSSPSVQCRSPRGKNIQGGKTLVSQLELQDSGTWCTVLQNQKKVEFKIDIVVLAFAQ
KASSIVYKKEGEQVEFSPLAFTVEKLTGSGELWQAERASSKSWITFDLKNKEVSVKR
VTQDPKLMGKKLPLHLTPQALPQYAGSGNLTALAEAKTGKLHQEVNLVVMRATQLQKN
LTCEVWGPTSPKLMLSLLENKEAKVSKREKAVWVLPNPEAGMWQCLLSDSGQVLLLESNIK
VLPTWSTPVQPGCVSGDTIVMTSGGPRTVAELEGKPFITALIRGSGYPCPSGFFRTCERDV
YDLRTREGHCLRLTHDHRVLMDDGLEWRAAGELERGDRLVMDDAAGEFPALATFRGLRG
AGRQDVYDATVYGASAFANGFIVHACGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQLV
TYNGKTYKCLQPHTSLAGWEPNSVPALWQLQ

MNRGVPRFRHLLVLQLALLPAATQG
-25
60
120
180
240
300
360
420
480
540
571

(ii) CD4-AUTOCLEAVAGE

KKVVLGKKGDTVELTCTASQKKSQIFHWKNSNQIKILGNQGSFLTKGPSKLNDRADSRRS
LWDQGNFPLIIKNLKIEDSDTYICEVEDQKEEVQLLVFGLTANSDTHLLQGQSLTLTLES
PPGSSPSVQCRSPRGKNIQGGKTLVSQLELQDSGTWCTVLQNQKKVEFKIDIVVLAFAQ
KASSIVYKKEGEQVEFSPLAFTVEKLTGSGELWQAERASSKSWITFDLKNKEVSVKR
VTQDPKLMGKKLPLHLTPQALPQYAGSGNLTALAEAKTGKLHQEVNLVVMRATQLQKN
LTCEVWGPTSPKLMLSLLENKEAKVSKREKAVWVLPNPEAGMWQCLLSDSGQVLLLESNIK
VLPTWSTPVQPGCVSGDTIVMTSGGPRTVAELEGKPFITALIRGSGYPCPSGFFRTCERDV
YDLRTREGHCLRLTHDHRVLMDDGLEWRAAGELERGDRLVMDDAAGEFPALATFRGLRG
AGRQDVYDATVYGASAFANGFIVHACGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQLV
TYNGKTYKCLQPHTSLAGWEPNSVPALWQLQ

60
120
180
240
300
360
420
480
540
571

FIG. 40A

CD4 C-terminal-X-terminus (cont'd)

(iii)

CD4-THIOESTER

KKVLGKKKGD⁶⁰TVELTCTASQKKS¹²⁰IQFHWKNS¹⁸⁰NQIKILGNQGS²⁴⁰F³⁰⁰LTGKPSKLNDRAD³⁶⁰SRRS
 LWDQGNFPLIIK¹²⁰NLKIEDSDTYICEVEDQKEEVQ¹⁸⁰LLVFGLTANS²⁴⁰DT³⁰⁰HL³⁶⁰LQGQSL³⁷²TLTLES
 PPGSSPSVQCRSPRGKNIQGGK¹²⁰TL¹⁸⁰SVSQLELQD²⁴⁰SGTW³⁰⁰CTV³⁶⁰LQNQKKVEFKIDIV³⁷²WLA⁶⁰FQ
 KASSIVYKKEGEQVEFSF¹²⁰PLAFTVEKL¹⁸⁰TGSGELW²⁴⁰WQAERASS³⁰⁰SKSWIT³⁶⁰FDLKNKEVSV³⁷²KR
 VTQDPKLQMGKKLPLHL¹²⁰TL¹⁸⁰PQALPQYAGSGN²⁴⁰LT³⁰⁰LALEAK³⁶⁰TGKLHQEVN³⁷²LVVMRATQLQKN
 LTCEVWGPTSPKLM¹²⁰LSLKLENKEAKVSKREKAV¹⁸⁰VWLNPEAGMWQCL²⁴⁰LSDSGQVLL³⁰⁰LESNIK
 VLPTWSTPVQPX³⁷²

(iv)

CD4-X

KKVLGKKKGD⁶⁰TVELTCTASQKKS¹²⁰IQFHWKNS¹⁸⁰NQIKILGNQGS²⁴⁰F³⁰⁰LTGKPSKLNDRAD³⁶⁰SRRS
 LWDQGNFPLIIK¹²⁰NLKIEDSDTYICEVEDQKEEVQ¹⁸⁰LLVFGLTANS²⁴⁰DT³⁰⁰HL³⁶⁰LQGQSL³⁷³TLTLES
 PPGSSPSVQCRSPRGKNIQGGK¹²⁰TL¹⁸⁰SVSQLELQD²⁴⁰SGTW³⁰⁰CTV³⁶⁰LQNQKKVEFKIDIV³⁷³WLA⁶⁰FQ
 KASSIVYKKEGEQVEFSF¹²⁰PLAFTVEKL¹⁸⁰TGSGELW²⁴⁰WQAERASS³⁰⁰SKSWIT³⁶⁰FDLKNKEVSV³⁷³KR
 VTQDPKLQMGKKLPLHL¹²⁰TL¹⁸⁰PQALPQYAGSGN²⁴⁰LT³⁰⁰LALEAK³⁶⁰TGKLHQEVN³⁷³LVVMRATQLQKN
 LTCEVWGPTSPKLM¹²⁰LSLKLENKEAKVSKREKAV¹⁸⁰VWLNPEAGMWQCL²⁴⁰LSDSGQVLL³⁰⁰LESNIK
 VLPTWSTPVQPX³⁷³

FIG. 40B

VH-CH1 C-terminal-X-terminus

(i) PRE-Di62-VH-CH1-AUTOCLEAVAGE

QIQLVQSGPELKKPGETVKISCKASGYTFTHYGMNWKQAPGKGLKWMGWINTYTGPTY
ADDFKEHFASFLETSASTVFLQINNLIKNETATYFCARERGDAMDYWGQTSVTVSSAST
KGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPTVSWNSGALTSGVHTFPAVLQSSGLY
SLSSVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTGCVSGDTIVMTSGGP
RTVAELEGKPF^{MAVWVTLLFLMAAAQSIQA}FTALIRGSGYPCPSGFFRTCERDVYDLRTREGHCLRLTHDHRVLMDDGGL
EWRAAGELERGDRLVMDDAAGEFPALATFRGLRGAGRQDVYDATVYGASAF⁶⁰TANGFIVHA
CGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQLVTYNGKTYKCLQPHTSLAGWEP¹²⁰SNVPA
LWQLQ¹⁸⁰
²⁴⁰
³⁰⁰
³⁶⁰
⁴²⁰
⁴²⁵

(ii) Di62-VH-CH1-AUTOCLEAVAGE

QIQLVQSGPELKKPGETVKISCKASGYTFTHYGMNWKQAPGKGLKWMGWINTYTGPTY
ADDFKEHFASFLETSASTVFLQINNLIKNETATYFCARERGDAMDYWGQTSVTVSSAST
KGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPTVSWNSGALTSGVHTFPAVLQSSGLY
SLSSVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTGCVSGDTIVMTSGGP
RTVAELEGKPF⁶⁰FTALIRGSGYPCPSGFFRTCERDVYDLRTREGHCLRLTHDHRVLMDDGGL
EWRAAGELERGDRLVMDDAAGEFPALATFRGLRGAGRQDVYDATVYGASAF¹²⁰TANGFIVHA
CGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQLVTYNGKTYKCLQPHTSLAGWEP¹⁸⁰SNVPA
LWQLQ²⁴⁰
³⁰⁰
³⁶⁰
⁴²⁰
⁴²⁵

FIG. 41A

VH-CH1 C-terminal-X-terminus (cont'd)

(iii) Di62-VH-CH1-THIOESTER

QIQLVQSGPELKKPGETVKISCKASGYTFTHYGMNWVKQAPGKGLKWMGWINTYTGPTY 60
 ADDFKEHFASFLETSASTVFLQINNLIKNEATATYFCARERGDAMDYWGQGTSTVTVSSAST 120
 KGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPTVSWNSGALTSGVHTFPAVLQSSGLY 180
 SLSSVWTVPSSSLGTQTYICNVNHHKPSNTKVDKKVEPKSCDKTHTX 226

(iv) Di62-VH-CH1-X

QIQLVQSGPELKKPGETVKISCKASGYTFTHYGMNWVKQAPGKGLKWMGWINTYTGPTY 60
 ADDFKEHFASFLETSASTVFLQINNLIKNEATATYFCARERGDAMDYWGQGTSTVTVSSAST 120
 KGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPTVSWNSGALTSGVHTFPAVLQSSGLY 180
 SLSSVWTVPSSSLGTQTYICNVNHHKPSNTKVDKKVEPKSCDKTHTGX 227

FIG. 41B

Vk-ck

(i) PRE-Di62-Vk-ck

SIVMTQTPKELLVSAGDRVTITCTASQSVSNDVVWYQQKPGQSPKMLMYSAFNRYTGVDPD
RFTGRGYGTDFTFTISSVQAEDLAVYFCQQDYNSPRTFGGGTKLEIKRTVAAPSVFIFPP
SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSYLSSTLT
LSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
MKSQTQVFVFLLLCVSGAHG
-20
60
120
180
214

(ii) Di62-Vk-ck

SIVMTQTPKELLVSAGDRVTITCTASQSVSNDVVWYQQKPGQSPKMLMYSAFNRYTGVDPD
RFTGRGYGTDFTFTISSVQAEDLAVYFCQQDYNSPRTFGGGTKLEIKRTVAAPSVFIFPP
SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSYLSSTLT
LSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
60
120
180
214

FIG. 42

TNR1A C-terminal-X-terminus

(i) PRE-TNR1A-AUTOCLEAVAGE

IYPSGVI⁻²¹GLVPHLGDREKRD⁶⁰SVCPQGYIHPQNNSICCTKCHKGT¹²⁰LYND¹⁸⁰CPGPGQD²⁴⁰TDC
 RECESG³⁰⁰SFTASENHLRHCLSCSKCRKEMGQVEISSCTVD³⁶⁰RD³⁹⁰TVCGCRKNQYRHYWSENLF
 QCFNCSLC⁻²¹CLNGTVHLS⁶⁰CQEKQNTVCTCHAGFFLRENECVSCSNCKK¹²⁰SLE¹⁸⁰CTK²⁴⁰LC³⁰⁰LPQIEN
 VKGTEDSGTTGCVSGDTIVMTSGGPR³⁶⁰TVAELEGK³⁹⁰PFTALIRGSGYPCPSGFFRT⁻²¹CERDVY
 DLRTREGHCLRLTHDHRVLVMDGGLEWRAAGELERGDRLVMD⁶⁰DAAGEF¹²⁰PALATFRGLRGA
 GRQDVYDATVYGASAF¹⁸⁰TANGFIVHACGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQLVT
 YNGKTYKCLQPHTSLAGWEPSPALWQLQ

(ii) TNR1A-AUTOCLEAVAGE

IYPSGVI⁶⁰GLVPHLGDREKRD¹²⁰SVCPQGYIHPQNNSICCTKCHKGT¹⁸⁰LYND²⁴⁰CPGPGQD³⁰⁰TDC
 RECESG³⁶⁰SFTASENHLRHCLSCSKCRKEMGQVEISSCTVD³⁹⁰RD⁻²¹TVCGCRKNQYRHYWSENLF
 QCFNCSLC⁶⁰CLNGTVHLS¹²⁰CQEKQNTVCTCHAGFFLRENECVSCSNCKK¹⁸⁰SLE²⁴⁰CTK³⁰⁰LC³⁶⁰LPQIEN
 VKGTEDSGTTGCVSGDTIVMTSGGPR³⁹⁰TVAELEGK⁻²¹PFTALIRGSGYPCPSGFFRT⁶⁰CERDVY
 DLRTREGHCLRLTHDHRVLVMDGGLEWRAAGELERGDRLVMD¹²⁰DAAGEF¹⁸⁰PALATFRGLRGA
 GRQDVYDATVYGASAF²⁴⁰TANGFIVHACGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQLVT
 YNGKTYKCLQPHTSLAGWEPSPALWQLQ

(iii) TNR1A-THIOESTER

IYPSGVI⁶⁰GLVPHLGDREKRD¹²⁰SVCPQGYIHPQNNSICCTKCHKGT¹⁸⁰LYND²⁴⁰CPGPGQD³⁰⁰TDC
 RECESG³⁶⁰SFTASENHLRHCLSCSKCRKEMGQVEISSCTVD³⁹⁰RD⁻²¹TVCGCRKNQYRHYWSENLF
 QCFNCSLC⁶⁰CLNGTVHLS¹²⁰CQEKQNTVCTCHAGFFLRENECVSCSNCKK¹⁸⁰SLE²⁴⁰CTK³⁰⁰LC³⁶⁰LPQIEN
 VKGTEDSGTTX³⁹⁰

(iv) TNR1A-X

IYPSGVI⁶⁰GLVPHLGDREKRD¹²⁰SVCPQGYIHPQNNSICCTKCHKGT¹⁸⁰LYND²⁴⁰CPGPGQD³⁰⁰TDC
 RECESG³⁶⁰SFTASENHLRHCLSCSKCRKEMGQVEISSCTVD³⁹⁰RD⁻²¹TVCGCRKNQYRHYWSENLF
 QCFNCSLC⁶⁰CLNGTVHLS¹²⁰CQEKQNTVCTCHAGFFLRENECVSCSNCKK¹⁸⁰SLE²⁴⁰CTK³⁰⁰LC³⁶⁰LPQIEN
 VKGTEDSGTTGX³⁹⁰

FIG. 43

TNR1B C-terminal-X-terminus

(i) PRE-TNR1B-AUTOCLEAVAGE

LPAQVAFTPYAPEPGSTCRLREYYDQTAQMCCSKSPGQHAKVFCTKTSDTVCDSCEDST
 YTQLWNWVPECLSCGSRCSDDQVETQACTREQNRICTCRPGWYCALSKQEGCRLCAPLRK
 CRPGFGVARPGTETSDWCKPCAPGTFSNTTSSDIDCRPHQICNVVAIPGNASMDAVCTS
 TSPTRSMAPGAVHLPQPVSTRSQHTQPTPEPSTAPSTSFLLPMGPSPPAEGSTGDGCVSG
 DTIVMTSGGPRTVAELEGKPF⁻²²TALIRGSGYPCPSGFFRT⁶⁰CERDVYDLRTREGHCLRLTHD
 HRVLVMDGGLEWRAAGELERGDRLVMDDAAGEFPALATFRGLRGAGRQDVYDATVYGASA
 FTANGFIVHACGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQLVTYNGKTYKCLQPHTSL
 AGWEP¹²⁰SNVPALWQLQ¹⁸⁰

(ii) TNR1B-AUTOCLEAVAGE

LPAQVAFTPYAPEPGSTCRLREYYDQTAQMCCSKSPGQHAKVFCTKTSDTVCDSCEDST
 YTQLWNWVPECLSCGSRCSDDQVETQACTREQNRICTCRPGWYCALSKQEGCRLCAPLRK
 CRPGFGVARPGTETSDWCKPCAPGTFSNTTSSDIDCRPHQICNVVAIPGNASMDAVCTS
 TSPTRSMAPGAVHLPQPVSTRSQHTQPTPEPSTAPSTSFLLPMGPSPPAEGSTGDGCVSG
 DTIVMTSGGPRTVAELEGKPF⁶⁰TALIRGSGYPCPSGFFRT¹²⁰CERDVYDLRTREGHCLRLTHD
 HRVLVMDGGLEWRAAGELERGDRLVMDDAAGEFPALATFRGLRGAGRQDVYDATVYGASA
 FTANGFIVHACGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQLVTYNGKTYKCLQPHTSL
 AGWEP¹⁸⁰SNVPALWQLQ²⁴⁰

(iii) TNR1B-THIOESTER

LPAQVAFTPYAPEPGSTCRLREYYDQTAQMCCSKSPGQHAKVFCTKTSDTVCDSCEDST
 YTQLWNWVPECLSCGSRCSDDQVETQACTREQNRICTCRPGWYCALSKQEGCRLCAPLRK
 CRPGFGVARPGTETSDWCKPCAPGTFSNTTSSDIDCRPHQICNVVAIPGNASMDAVCTS
 TSPTRSMAPGAVHLPQPVSTRSQHTQPTPEPSTAPSTSFLLPMGPSPPAEGSTGDG⁶⁰X¹²⁰

(iv) TNR1B-X

LPAQVAFTPYAPEPGSTCRLREYYDQTAQMCCSKSPGQHAKVFCTKTSDTVCDSCEDST
 YTQLWNWVPECLSCGSRCSDDQVETQACTREQNRICTCRPGWYCALSKQEGCRLCAPLRK
 CRPGFGVARPGTETSDWCKPCAPGTFSNTTSSDIDCRPHQICNVVAIPGNASMDAVCTS
 TSPTRSMAPGAVHLPQPVSTRSQHTQPTPEPSTAPSTSFLLPMGPSPPAEGSTGDG⁶⁰X¹²⁰

FIG. 44A

TNR1B-immunoadhesin

(i) PRE-TNR1B-immunoadhesin

LPAQVAFTPYAPEPGSTCRLREYYDQTAQMCCSKCPGQHAKVFCTKTSDTVCDSCEDST
 YQLWNWVPECLSCGSRCSDDQVETQACTREQNRICTCRPGWYCALSKQEGCRLCAPLRK
 CRPGFGVARPGTETSDWCKPCAPGTFSTNTSSDIDICRPHQICNVVAIPGNASMDAVCTS
 TSPTRSMAPGAVHLPPVSTRSQHTQPTPEPSTAPSTSFLPMGPSPPAEGSTGDEPKSC
 DKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYVD
 GVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAK
 GQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPPVLD
 DGSFFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSLSPGK

-22
 60
 120
 180
 240
 300
 360
 420
 467

(ii) TNR1B-immunoadhesin

LPAQVAFTPYAPEPGSTCRLREYYDQTAQMCCSKCPGQHAKVFCTKTSDTVCDSCEDST
 YQLWNWVPECLSCGSRCSDDQVETQACTREQNRICTCRPGWYCALSKQEGCRLCAPLRK
 CRPGFGVARPGTETSDWCKPCAPGTFSTNTSSDIDICRPHQICNVVAIPGNASMDAVCTS
 TSPTRSMAPGAVHLPPVSTRSQHTQPTPEPSTAPSTSFLPMGPSPPAEGSTGDEPKSC
 DKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYVD
 GVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYCKVSNKALPAPIEKTISKAK
 GQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPPVLD
 DGSFFFLYSKLTVDKSRWQQGNVFCSCVMHEALHNHYTQKSLSLSPGK

60
 120
 180
 240
 300
 360
 420
 467

FIG. 44B

VGFR1 C-terminal-X-terminus

(i) PRE-VGFR1-AUTOCLEAVAGE

SKLKDPESLKGTHIMQAGQTLHLQCRGEAAHKWSLPEMVSKESERLSITKSACGRNGK
QFCSTLTNTAQANHTGFYSCKYLAVPTSKKETESAIYIFISDTGRPFVEMYSEIPEII
HMTGRELVIPCRVTSNITVTLLKFPDLTLPDGKRIIWDNRKGFIIISNATYKEIGLLT
CEATVNGHLYKTNYLTHRQNTIIDVQISTPRPVKLLRGHTLVNCTATTPLNTRVQMTW
SYPDEKNKRASVRRRIDQSNSHANIFYSVLTIDKMQNKDKGLYTCRVRSGPSFKSVNTSV
HIYDKAFITVKHRKQVLETVAGKRSYRLSMKVKAFFSPPEVWLKDGLPATEKSARYLTR
GYSIIKDVTEEDAGNYTILLSIKQSNVFNLTATLIVNVKQIYEKAVSSFPDPALYPL
GSRQILTCTAYGIPQPTIKFWHPCNNHSEARCDFCSNNEESFILDADSNMGNRIESIT
QRMATIEGKNKMASTLWADSRISGIYICIASNKVGTVGRNISFYITDVPNGFHVNLEKM
PTEGEDLKLSTVKNKFLYRDVTWILLRTVNNRTMHSISKQMAITKEHSITLNLTIMNV
SLQDSGTYACRARNVYTGEIILQKKEITIRDQEAPYLLRNLSDHITVAISSSTLTDCHANG
VPEPQITWFKNNHKIQEPGIIILGPGSSTLFIERVTEEDGEVYHCKATNQKGSVESSAYL
TVQGTSDKSNLEGCVSGDTIVMTSGGPRTVAELEGKPTALIRGSGYPCPSGFFRTCERD
VYDLRTREGHCLRLTHDHRVLVMDGGLWRAAGELERGDRLVMDDAAGEFPALATFRGLR
GAGRQDVYDATVYGASAFTANGFIVHACGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQL
VTYNGKTYKCLQPHTSLAGWEPNSVPALWQLQ

-26
60
120
180
240
300
360
420
480
540
600
660
720
780
840
900
932

FIG. 45A

VGFR1 C-terminal-X-terminus (cont'd)

(ii)

VGFR1-AUTOCLEAVAGE

SKLKDPELSLKGTHIMQAGQTLHLQCRGEAAHKWSLPEMVSKESERLSITKSACGRNGK
 QFCSTLTNNTAQANHTGFYSCKYLAVPTSKKKETESAIFYISDTGRPFVEMYSEIPEII
 HMTGRELVIPCRVTSNITVTLLKKFPLDTLIPDGKRIIWDNRKGFIIISNATYKEIGLLT
 CEATVNGHLYKTNYLTHRQNTIIIDVQISTPRPVKLLRGHTLVLNCTATTPLNTRVQMTW
 SYPDEKNKRASVRRRIDQNSHANI FYSVL TIDKMQNKDKGLYTCRVRSGPSFKSVNTSV
 HIYDKAFITVKHRKQQLVETVAGKRSYRLSMKVKAFFSPEVWVWLDGLPATEKSARYLTR
 GYSLIIKDVTEEDAGNYTILLSIKQSNVFKNLTATLIVNVKPIYIEKAVSSFPDPALYPL
 GSRQILTCTAYGIPQPTIKWFHPCNHNHSEARCFCSNNEESFILDADSNMGNRIESIT
 QRMALIEGKNKMASTLVADSRISGIYICIASNKVGTVGRNISFYITDVPNGFHVNLEKM
 PTEGEDLKLSTVKNKFLYRDVTWILLRTVNNRTHMYSISKQMAITKEHSITLNLTIMNV
 SLQDSGTYACRARNVYTGEIILQKKEITIRDQEAPYLLRNLSDHTVAISSSTLDCCHANG
 VPEPQITWFKNNHKIQEPIIILGPGSSTLFIERVTEDEGVYHCKATNQKGSVESSAYL
 TVQGTSDKSNLEGCVSGDTIVMTSGGPRTVAEELEGKPF TALIRGSGYPCPSGFFRTCERD
 VYDLRTRREGHCLRLTHDHRVLVMDGGLEWRAAGELERGDRLVMDDAAGEFPALATFRGLR
 GAGRQDVYDATVYGASAFANGFIVHACGEQPGTGLNSGLTTNPGVSAWQVNTAYTAGQL
 VTYNGKTYKCLQPHTSLAGWEPNSV/PALWQLQ

60
 120
 180
 240
 300
 360
 420
 480
 540
 600
 660
 720
 780
 840
 900
 932

FIG. 45B

VGFR1 C-terminal-X-terminus (cont'd)

(iii) VGFR1-THIOESTER

SKLKDPESLSKGTQHIMQAGQTLHLQCRGEAAHKWSLPEMVSKESERLSITKSACGRNGK 60
 QFCSTLTLNTAQANHTGFYSCKYLAVPTSKKETESAIYIFISDTGRPFVEMYSEIPEII 120
 HMTGRELVIPCRVTSNITVTLKKFPLDTLIPDGKRIIWDNRKGFIIISNATYKEIGLLT 180
 CEATVNGHLYKTNYLTHRQNTIIDVQISTPRPVKLLRGHTLVLNCTATTPLNTRVQMTW 240
 SYPDEKNRASVRRRIDQNSHANIFYSVLTIDKMQNKDGLYTCRVRSGPSFKSVNTSV 300
 HIYDKAFITVKHRKQVLETVAGKRSYRLSMKVKAFFSPVWVWLDGLPATEKSARYLTR 360
 GYSLIIKDVTEEDAGNYTILLSIKQSNVFNLTATLIVNVKQIYEKAVSSFPDPALYPL 420
 GSRQILTCTAYGIPQPTIKWFHPCNHNHSEARCDFCSNNEESFILDADSNMGNRIESIT 480
 QRMATIEGKNKMASTLVADSRISGIYICIASNKVGTGRNISFYITDVPNGFHVNLEKM 540
 PTEGEDLKLSCTVNKFLYRDVTWILLRTVNNRTHMYSISKQKMAITKEHSITLNLTIMNV 600
 SLQDSGTYACRARNVYTGEIILQKKEITIRDQEAPELLRNLSDHTVAISSSTLDCCHANG 660
 VPEPQITWFKNNHKIQQEPGIILGPGSSTLFIERVTEDEGVYHCKATNQKGSVESAYL 720
 TVQGTSDKSNLEX 733

(iv) VGFR1-X

SKLKDPESLSKGTQHIMQAGQTLHLQCRGEAAHKWSLPEMVSKESERLSITKSACGRNGK 60
 QFCSTLTLNTAQANHTGFYSCKYLAVPTSKKETESAIYIFISDTGRPFVEMYSEIPEII 120
 HMTGRELVIPCRVTSNITVTLKKFPLDTLIPDGKRIIWDNRKGFIIISNATYKEIGLLT 180
 CEATVNGHLYKTNYLTHRQNTIIDVQISTPRPVKLLRGHTLVLNCTATTPLNTRVQMTW 240
 SYPDEKNRASVRRRIDQNSHANIFYSVLTIDKMQNKDGLYTCRVRSGPSFKSVNTSV 300
 HIYDKAFITVKHRKQVLETVAGKRSYRLSMKVKAFFSPVWVWLDGLPATEKSARYLTR 360
 GYSLIIKDVTEEDAGNYTILLSIKQSNVFNLTATLIVNVKQIYEKAVSSFPDPALYPL 420
 GSRQILTCTAYGIPQPTIKWFHPCNHNHSEARCDFCSNNEESFILDADSNMGNRIESIT 480
 QRMATIEGKNKMASTLVADSRISGIYICIASNKVGTGRNISFYITDVPNGFHVNLEKM 540
 PTEGEDLKLSCTVNKFLYRDVTWILLRTVNNRTHMYSISKQKMAITKEHSITLNLTIMNV 600
 SLQDSGTYACRARNVYTGEIILQKKEITIRDQEAPELLRNLSDHTVAISSSTLDCCHANG 660
 VPEPQITWFKNNHKIQQEPGIILGPGSSTLFIERVTEDEGVYHCKATNQKGSVESAYL 720
 TVQGTSDKSNLEGX 734

FIG. 45C

VGFR2 C-terminal-X-terminus

(i) PRE-VGFR2-AUTOCLEAVAGE

ASVGLPSVSLDLPRLSIQKDILTIKANTTLQITCRGQRDLWLWPNNQSGSEQRVEVTEC
 SDGLFCKTLTIPKVIIGNDTGAYKCFYRETDLASVIYVYQDYRSPFIASVSDQHGVVYIT
 ENKNKTWVIPCLGSIISNLNVSLCARYPEKRFVDPDGNRISWDSKKGFTIPSYMISYAGMVF
 CEAKINDESYSIMYIVVVGRIYDVVLSPSHGIELSVGEKLVLNCTARTELVNGIDFN
 WEYPSSKHQHKLVNRDLKTQSGSEMKKFLSTLTIDGVRSDQGLYTCAASSGLMTKKNS
 TFVRVHEKPEVAFSGMESLVEATVGERVRIPAKYLGYPPEIKWKNGIPILESNHTIKA
 GHVLTIMEVSESDTGNVTIILTNPISKEKQSHVSVLVVYVPPQIGEKSLISPVDSYQYGT
 TQTLTCTVYAIPPPPIHWWQLEEECANEPSQAVSVTNPYPCEEWRSEDFQGGNKIEV
 NKNQFALIEGKNKTVSTLVIAANVSALYKCEAVNKVGRGERVISFHVTRGPEITLQPDN
 QPTEQESVSLWCTADRSTFENLTWYKLGQPLPIHVGEPTPVCKNLDTLWKLNATMFSN
 STNDILIMELKNASLQDQDYVCLAQDRKTKRHCVRQLTVLERVAPTITGNLENQTTT
 IGESIEVSCTASGNPPQIMWFKDNETLVEDSGIVLKDGNRNLTIIRVRKEDEGLYTCQA
 CSVLGCAKVEAFFIIEGAQEKTNLEGCVSGDTIVMTSGGPRTVAELEGKPF TALIRGSGY
 PCPSGFFRTCERDVYDLRTREGHCLRLTHDHRVLVMDGGLEWRAAGELERGDRLVMDDAA
 GEFPALATFRGLRGAGRQDVYDATVYGASAFANGFIVHACGEQPGTGLNSGLTTNPGVS
 AWQVNTAYTAGQLVTYNGKTYKCLQPHTSLAGWEPNSVPALWQLQ

FIG. 46A

VGFR2 C-terminal-X-terminus (cont'd)

(ii) VGFR2-AUTOCLEAVAGE

ASVGLPSVSLDLRLSIQKDILTIKANTTLQITCRGQRDLWLWPNNQSGSEQRVEVTEC	60
SDGLFCKTLTIPIKVIGNDTGAYKCFYRETDLASVIYVYQDYRSPFIASVSDQHGVYIT	120
ENKNKTVVIPCLGSIISNLNLSLCARYPEKRFVDPGNRISWDSKKGFTIPSYMISYAGMVF	180
CEAKINDESYQSIMYIVVWVGRIYDVVLSPSHGIELSVGEKLVLNCTARTELNVGIDFN	240
WEYPSSKHQHKLLVNRDLKTQSGSEMKKFLSTLTIDGVTSDQGLYTCASSGLMTKKNS	300
TFVRVHEKPFVAFSGMESLVEATVGERVRIPAKYLGYPPEIKWYKNGIPILESNHTIKA	360
GHVLTIMEVSESDTGNYSVILTNPISKEKQSHVSLVYVPPQIGEKSLISPVDSYQGT	420
TQTLTCTVYAIIPPHHHWYWLQEEECANEPQAVSVTNYPCEEWRSVEDFQGGNKIEV	480
NKNQFALIEGKNKTVSTLVIQAANVSALYKCEAVNKVGRGERVISFHVTRGPEITLQPD	540
QPTQESVSLWCTADRSTFENLTWYKLGQPLPIHVGEPTPVCKNLDLWKLNATMFSN	600
STNDILIMELKNASLQDQGDYVCLAQDRKTKKRHCVRQLTVLERVAPTITGNLENQTT	660
IGESIEVSCTASGNPPQIMWFKDNETLVEDSGIVLKDGNRNLTIIRVRKEDEGLYTCQA	720
CSVLGCAKVEAFFIIEGAQEKTNLEGCVSGDTIVMTSGGPRTVAELEGKPFALIRGSGY	780
PCPSGFFRTCERDVYDLRTREGHCLRLTHDHRVLVMDGGLEWRAAGELERGDRLVMDDAA	840
GEFPALATFRGLRGAGRQDVYDATVYGASFTANGFIVHACGEQPGTGLNSGLTTNPGVS	900
AWQVNTAYTAGQLVTYNGKTYKCLQPHTSLAGWEPNSNPALWQLQ	945

FIG. 46B

VGFR2 C-terminal-X-terminus (cont'd)

(iii) VGFR2-THIOESTER

ASVGLPSVSLDLPRLSIQKDILTIKANTTLQITCRGQRDLWLWPNNQSGSEQRVEVTEC 60
 SDGLFCKTLTIPIKVIGNDTGAYKCFYRETDLASVIYVYVQDYRSPFIASVSDQHGVVYIT 120
 ENKNKTWIPCLGSIISNLNVSCLARYPEKRFVDPGNRISWDSKKGFTIPSYMISYAGMVF 180
 CEAKINDESYQSIMYIVVVGRIYDVVLSPSHGIELSVGEKLVNCTARTELVNGIDFN 240
 WEYPSKHKQKKLVNRDLKTQSGSEMKKFLSTLTIDGVTNRSDQGLYTCAASSGLMTKKNS 300
 TFRVVEKPFVAFGSGMESLVEATVGERVRIPAKYLGYPPEIKWKYKNGIPIESNHTIKA 360
 GHVLTIMEVSDRTGNYTVILTNPISKEKQSHVSVLVVYVPPQIGEKSLISPVDSYQYGT 420
 TQTLTCTVYAIPPPPIHWHYQLEEECANEPSQAVSVTNYPCEEWRSEDFQGGNKIEV 480
 NKNQFALIEGKNKTVSTLVIQAANVSALYKCEAVNKVGRGERVISFHVTRGPEITLQPDM 540
 QPTEQESVSLWCTADRSSTFENLTWYKLGQPPLPIHVGEPLTPVCKNLDTLWKLNATMFSN 600
 STNDILIMELKNASLQDQGDYVCLAQDRKTKKRHCVRQLTVLERVAPTITIGNLENQTTT 660
 IGESIEVSCTAGSNPPQIMWFKDNETLVEDSGIVLKDGNRNLTIRRVKKEDEGLYTCQA 720
 CSVLGCAKVEAFFIIEGAQKTNLEX 746

(iv) VGFR2-X

ASVGLPSVSLDLPRLSIQKDILTIKANTTLQITCRGQRDLWLWPNNQSGSEQRVEVTEC 60
 SDGLFCKTLTIPIKVIGNDTGAYKCFYRETDLASVIYVYVQDYRSPFIASVSDQHGVVYIT 120
 ENKNKTWIPCLGSIISNLNVSCLARYPEKRFVDPGNRISWDSKKGFTIPSYMISYAGMVF 180
 CEAKINDESYQSIMYIVVVGRIYDVVLSPSHGIELSVGEKLVNCTARTELVNGIDFN 240
 WEYPSKHKQKKLVNRDLKTQSGSEMKKFLSTLTIDGVTNRSDQGLYTCAASSGLMTKKNS 300
 TFRVVEKPFVAFGSGMESLVEATVGERVRIPAKYLGYPPEIKWKYKNGIPIESNHTIKA 360
 GHVLTIMEVSDRTGNYTVILTNPISKEKQSHVSVLVVYVPPQIGEKSLISPVDSYQYGT 420
 TQTLTCTVYAIPPPPIHWHYQLEEECANEPSQAVSVTNYPCEEWRSEDFQGGNKIEV 480
 NKNQFALIEGKNKTVSTLVIQAANVSALYKCEAVNKVGRGERVISFHVTRGPEITLQPDM 540
 QPTEQESVSLWCTADRSSTFENLTWYKLGQPPLPIHVGEPLTPVCKNLDTLWKLNATMFSN 600
 STNDILIMELKNASLQDQGDYVCLAQDRKTKKRHCVRQLTVLERVAPTITIGNLENQTTT 660
 IGESIEVSCTAGSNPPQIMWFKDNETLVEDSGIVLKDGNRNLTIRRVKKEDEGLYTCQA 720
 CSVLGCAKVEAFFIIEGAQKTNLEGX 747

FIG. 46C

VGFR3 C-terminal-X-terminus

(i) PRE-VGFR3-AUTOCLEAVAGE

YSMTPTLNIITEESHVIDTGDSLISCRGQHPLEWMPGAQEAPATGDKDSEDTGVVRDC
 EGTDARPYCKVLLHEVHANDTGSYCYKYIKARIEGTTAASSYVFVRDFEQPFINKPD
 TLLVNRKDAMWVPCLVSIPLNVTLRSQSSVLWPDGQEVWDDRRGMLVSTPLLHDALYL
 QCETTWGDQDFLSNPFLVHITGNELYDIQLLPRKSLELLVGEKLVNCTVWAEFNSGVTF
 DWDPGKQAERGKWVPERRSQQTHTLSSILTIHNVSQHDLGSYVCKANNGIQRFRESTE
 VIVHENPFISVEWLKGPILEATAGDELVKLPVLAAYPPPEFQWKDGKALSGRHSPhAL
 VLKVEASTGTYYTLALWNSAAGLRRNISLELVNVPPIHEKEASSPSIYSRHSRQALT
 CTAYGVPLPLSIQWHWRPWTCKMFAQRSRRRQQQDLMPQCRDWRVTTQDAVNPIESL
 DTWTEFVEGKNKTVSKLVIQNAVVSAMYKCVSNKVGQDERLIYFYVTIIPDGFTIESKP
 SEELLEGPVLLSCQADSYKYEHLRWYRLNLSTLHDAHGNPLLLDCKNVHLFATPLAASL
 EEVAPGARHATLSLSIPRVAPEHEGHYVCEVQDRRSHDKHKKYL SVQALEAPRLTQNL
 TDLLVNVSDSLEMQCLVAGAHAPSIWYKDERLLEEKSGVDLADSNQKLSIQRVREEDAG
 RYLCVNAKGCVNSSASVAEGSEDKSGMEGCVSGDTIVMTSGGPRTVAEELEGKPF TAL
 IRGSGYPCPSGFFRTCERDVYDLRTREGHCLRLTHDHRVLVMDGGLEWRAAGELERGDRL
 VMDDAAGEFPALATFRGLRGAGRQDVYDATVYGASFTANGFIVHACGEQPGTGLNSGLT
 TNPGVSAWQVNTAYTAGQLVTYNGKTYKCLQPHTSLAGWEPSPALWQLQ

FIG. 47A

VGFR3 C-terminal-X-terminus (cont'd)

(ii) VGFR3-AUTOCLEAVAGE

YSMTPTLTNITEESHVIDTGDLSISCRGQHLEWAWPGAQEA PATGDKDSEDTGVRDC
 EGTDARPYCKVLLLEHVHANDTGSYVCYKYIKARIEGTTAASSYVFVRDFEQPFINKPD
 TLLVNRKDAMWVCLVSIPLNVTLSQSSVLWPDGQEVVWDDRRGMLVSTPLLHDALYL
 QCETTWGDDQDFLSNPFLVHITGNELYDIQLPRKSLELLVGEKLVNCTVWAEFNSGVTF
 DWDYPGKQAERGKWPERRSQQTHTELSSILTIHNVSQHDLSYVCKANNIGIQRFRESTE
 VIVHENPFISVEWLKGPILEATAGDELVKLPVKLAAYPPPEFQWKDGKALSGRHS PHAL
 VLKEVTEASTGTYTLLALWNSAAGLRRNISLELVNPPQIHEKEASSPSIYSRHSRQALT
 CTAYGVPLPLSIQWHWRPWT PCKMFAQRSLRRRQQQDLMPQCRDWRVTTTQDAVNPIESL
 DTWTEFVEGKNKTVSKLVIQNANVSAMYKCVVSNKVGQDERLIYFYVTIIPDGFTIESKP
 SEELLEGOQPVLLSCQADSYKYEHLRWYRLNSTLHDAHGNPLLLDCKNVHLFATPLAASL
 EEVAPGARHATLSLSIPRVAPEHEGHYVCEVQDRRSHDKCHKKYSVQALEAPRLTQNL
 TDLLVNVSDSLEMQCLVAGAHAPSIWYKDERLLEEKSGVDLADSNQKLSIQRVREEDAG
 RYLCVCNAKGCVNSSASVAVEGSEDKSGMEGCVSGDTIVMTSGGPRTVAELEGKPF TAL
 IRGSGYPCPSGFFRTCERDVYDLRTREGHCLRLTHDHRVLMVDGGLEWRAAGELERGDRL
 VMDDAAGEFPALATFRGLRGAGRQDVYDATVYGASAF TANGFIVHACGEQPGTGLNSGLT
 TNPGVSAWQVNTAYTAGQLVTYNGKTYKCLQPHTSLAGWEP SNVPALWQLQ

60
 120
 180
 240
 300
 360
 420
 480
 540
 600
 660
 720
 780
 840
 900
 951

FIG. 47B

VGFR3 C-terminal-X-terminus (cont'd)

(iii) VGFR3-THIOESTER

YSMTPTLNIITEESHVIDTGDSLISCRGQHPLEAWPGAQEA PATGDKDSEDTGVVRDC 60
EGTDARPYCKVLLHEVHANDTGSYVCYKYIKARIEGTTAASSYVFVRD FEQPFINKPD 120
TLLVNRKDAMWVCLVSIPLNVTLSQSSVLWPDGQEVWDDRRGMLVSTPLLHDALYL 180
QCETTWGDDQDFLSNPFLVHITGNELYDIQLLPRKSLELLVGEKLVNCTVWAEFNSGVT 240
F 300
DWDYPGKQAERGKWVPERRSQQTHTLSSILTIHNVSQHDLSYVCKANNGIQRFRESTE 360
VIVHENPFISVEWLKGPILEATAGDELVKLPVKLAAYPPPEFQWKDGKALSGRHS PHAL 420
VLKEVTEASTGTYTTLALWNSAAGLRRNISLELVNVPPIIHEKEASSPSIYSRHSRQALT 480
CTAYGVPLPLSIQWHWRPWT PCKMFAQRSLRRRQQQDLMPQCRDWRVTTQDAVNPIESL 540
DTWTEFVEGKNKTVSKLVIQNAVVSAMYKCVSNKVSGQDERLIYFYVTTIPDGFTIESKP 600
SEELLEGQPVLLSCQADSYKYEHLRWYRLNLSLHDAHGNPLLLDCKNVHLFATPLAASL 660
EEVAPGARHATLSLSIPRVAPEHEGHYVCEVQDRRSHDKCHKKYL SVQALEAPRLTQNL 720
TDLLVNVSDSLQMCLVAGAHAPSIWYKDERLLEEKSGVDLADSNQKLSIQRVREEDAG 752
RYLCSVCNAKGVCVNSSASVAVEGSEDKGSMEX

(iv) VGFR3-X

YSMTPTLNIITEESHVIDTGDSLISCRGQHPLEAWPGAQEA PATGDKDSEDTGVVRDC 60
EGTDARPYCKVLLHEVHANDTGSYVCYKYIKARIEGTTAASSYVFVRD FEQPFINKPD 120
TLLVNRKDAMWVCLVSIPLNVTLSQSSVLWPDGQEVWDDRRGMLVSTPLLHDALYL 180
QCETTWGDDQDFLSNPFLVHITGNELYDIQLLPRKSLELLVGEKLVNCTVWAEFNSGVT 240
F 300
DWDYPGKQAERGKWVPERRSQQTHTLSSILTIHNVSQHDLSYVCKANNGIQRFRESTE 360
VIVHENPFISVEWLKGPILEATAGDELVKLPVKLAAYPPPEFQWKDGKALSGRHS PHAL 420
VLKEVTEASTGTYTTLALWNSAAGLRRNISLELVNVPPIIHEKEASSPSIYSRHSRQALT 480
CTAYGVPLPLSIQWHWRPWT PCKMFAQRSLRRRQQQDLMPQCRDWRVTTQDAVNPIESL 540
DTWTEFVEGKNKTVSKLVIQNAVVSAMYKCVSNKVSGQDERLIYFYVTTIPDGFTIESKP 600
SEELLEGQPVLLSCQADSYKYEHLRWYRLNLSLHDAHGNPLLLDCKNVHLFATPLAASL 660
EEVAPGARHATLSLSIPRVAPEHEGHYVCEVQDRRSHDKCHKKYL SVQALEAPRLTQNL 720
TDLLVNVSDSLQMCLVAGAHAPSIWYKDERLLEEKSGVDLADSNQKLSIQRVREEDAG 753
RYLCSVCNAKGVCVNSSASVAVEGSEDKGSMEX

FIG. 47C

ERBB1 C-terminal-X-terminus

(i) PRE-ERBB1-AUTOCLEAVAGE

LEEKVCQGTSNKLTQLGTFEDHFLSLQRMFNCEVWLG
 VAGYVLIALNTVERIPLENLQIIRGNMYEENS
 HGAVRFSNNPALCNVESIQWRDIVSSDFLSNMSDFQNHLSQCDPSCPNGSCWGAGE
 ENCQKLTIIICAQCSGRCRGKSPSDCCCHNQCAAGCTGPRESDCLVCRKFRDEATCKDTC
 PPLMLYNPTTYQMDVNPEGKYSFGATCVKKCPRNYVVDHGSCVRACGADSYEMEEDGVR
 KCKKEGPCRKVCNGIGIGEFKDSLSINATNIKHFNCTSIISGDLHILPVAFRGDSFTHT
 PPLDPQELDILKTVKEITGFLLIQAWPENRTDLHAFENLEIIRGRTKQHGQFSLAVVSLN
 ITSGLRSLKEISDGDVIIISGNKLCYANTINWKKLFGTSGQTKIIISNRGENSCKATGQ
 VCHALCSPEGCWGPEPRDCVSCRNVSRGECVCKNLLGEPRFVENSECICQCHPECLP
 QAMNITCTGRGPDNCIQCAHYIDGPHCVKTCAPAGVMGENTLVWKYADAGHVCHLCHPNPNC
 TYGCTGPGLEGCTNGPKIPSGCVSGDTIVMTSGGPRTVAELEGKFTALIRGSGYPCPS
 GFFRTCERDVYDLRTREGHCLRLTHDHRVLVMDGGLEWRAAGELERGDRLVMDDAAGEFP
 ALATFRGLRGAGRQDVYDATVYGASAFANGFIVHACGEQPGTGLNSGLTTNPGVSAWQV
 NTAYTAGQLVTYNGKTYKCLQPHTSLAGWEPNSVPALWQLQ

MRPSGTAGAALLALLAALCPASRA
 -24
 60
 120
 180
 240
 300
 360
 420
 480
 540
 600
 660
 720
 780
 821

(ii)

ERBB1-AUTOCLEAVAGE

LEEKVCQGTSNKLTQLGTFEDHFLSLQRMFNCEVWLG
 VAGYVLIALNTVERIPLENLQIIRGNMYEENS
 HGAVRFSNNPALCNVESIQWRDIVSSDFLSNMSDFQNHLSQCDPSCPNGSCWGAGE
 ENCQKLTIIICAQCSGRCRGKSPSDCCCHNQCAAGCTGPRESDCLVCRKFRDEATCKDTC
 PPLMLYNPTTYQMDVNPEGKYSFGATCVKKCPRNYVVDHGSCVRACGADSYEMEEDGVR
 KCKKEGPCRKVCNGIGIGEFKDSLSINATNIKHFNCTSIISGDLHILPVAFRGDSFTHT
 PPLDPQELDILKTVKEITGFLLIQAWPENRTDLHAFENLEIIRGRTKQHGQFSLAVVSLN
 ITSGLRSLKEISDGDVIIISGNKLCYANTINWKKLFGTSGQTKIIISNRGENSCKATGQ
 VCHALCSPEGCWGPEPRDCVSCRNVSRGECVCKNLLGEPRFVENSECICQCHPECLP
 QAMNITCTGRGPDNCIQCAHYIDGPHCVKTCAPAGVMGENTLVWKYADAGHVCHLCHPNPNC
 TYGCTGPGLEGCTNGPKIPSGCVSGDTIVMTSGGPRTVAELEGKFTALIRGSGYPCPS
 GFFRTCERDVYDLRTREGHCLRLTHDHRVLVMDGGLEWRAAGELERGDRLVMDDAAGEFP
 ALATFRGLRGAGRQDVYDATVYGASAFANGFIVHACGEQPGTGLNSGLTTNPGVSAWQV
 NTAYTAGQLVTYNGKTYKCLQPHTSLAGWEPNSVPALWQLQ

60
 120
 180
 240
 300
 360
 420
 480
 540
 600
 660
 720
 780
 821

FIG. 48A

ERBB1 C-terminal-X-terminus (cont'd)

(iii) ERBB1-THIOESTER

LEEKVCQGTSNKLTQLGTFEDHFLSLQRMFNCEVVLGNLEITYVQRNYDLSFLKTIQE 60
 VAGYVLIALNTVERIPLENLQIIRGNMYYENSYALAVLSNYDANKTGLKELPMRNLQEIL 120
 HGAVRFSNNPALCNVESIQWRDIVSSDFLSNMSMDFQNHLSGCQKCDPSCPNGSCWGAGE 180
 ENCQKLTIIICAQQCSGRCKGSPSDCCCHNQCAAGCTGPRESDCLVCRKFRDEATCKDTC 240
 PPLMLYNPTTYQMDVNPPEGKYSFGATCVKKCPRNVVTDHGSCVRACGADSYEMEEDGVR 300
 KCKKCEGPCRKVCNGIGIGIEFKDLSINATNIKHFNCTISGDLHILPVAFRGDSFTHT 360
 PPLDPQELDILKTVKEITGFLLIQAWPENRTDLHAFENLEIIRGRTKQHGFSLAVVSLN 420
 ITSLGLRSLKEISDGDVVISGNKNLCYANTINWKKLFGTSGQKTKIISNRGENSCKATGQ 480
 VCHALCSPEGCGPEPRDCVSCRNVSRGRECVDKCNLLEGEPRFVENSECIIQCHPECLP 540
 QAMNITCTGRGPDNCIQCAHYIDGPHCVKTCPAGVMGENNTLVWKYADAGHVCHLCHPNC 600
 TYGCTGPGLEGCPNGPKIPSX 622

(iv) ERBB1-X

LEEKVCQGTSNKLTQLGTFEDHFLSLQRMFNCEVVLGNLEITYVQRNYDLSFLKTIQE 60
 VAGYVLIALNTVERIPLENLQIIRGNMYYENSYALAVLSNYDANKTGLKELPMRNLQEIL 120
 HGAVRFSNNPALCNVESIQWRDIVSSDFLSNMSMDFQNHLSGCQKCDPSCPNGSCWGAGE 180
 ENCQKLTIIICAQQCSGRCKGSPSDCCCHNQCAAGCTGPRESDCLVCRKFRDEATCKDTC 240
 PPLMLYNPTTYQMDVNPPEGKYSFGATCVKKCPRNVVTDHGSCVRACGADSYEMEEDGVR 300
 KCKKCEGPCRKVCNGIGIGIEFKDLSINATNIKHFNCTISGDLHILPVAFRGDSFTHT 360
 PPLDPQELDILKTVKEITGFLLIQAWPENRTDLHAFENLEIIRGRTKQHGFSLAVVSLN 420
 ITSLGLRSLKEISDGDVVISGNKNLCYANTINWKKLFGTSGQKTKIISNRGENSCKATGQ 480
 VCHALCSPEGCGPEPRDCVSCRNVSRGRECVDKCNLLEGEPRFVENSECIIQCHPECLP 540
 QAMNITCTGRGPDNCIQCAHYIDGPHCVKTCPAGVMGENNTLVWKYADAGHVCHLCHPNC 600
 TYGCTGPGLEGCPNGPKIPSGX 623

FIG. 48B

ERBB2 C-terminal-X-terminus

(i)

PRE-ERBB2-AUTOCLEAVAGE

TQVCTGTMKRLRPASPETHLDMRLHYQGCVVQGNLELTYLPTNASLSFLQDIQEVQG
 YVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPTVTGASPGGLRELQL
 RSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQALTLIDTNRSRACHPCSPMCKGS
 RCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLFHNSG
 ICELHCPALVTYNTDTFESMPNPEGRTYTFGASCVTACPNYLSLTDVGSCTLVCPHNSG
 TAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKIFGSLAFLESFD
 GDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPLDSVFQNLQVIRGRILHNGAYS
 LTLQGLGISWLGLRSLRELGSGLAIHHNTHLCFVHTVPWDQLFRNPQALLHTANRPED
 ECVGEGLAHQLCARGHCWGPPTQCVNCSQFLRGQECVEECRVLQGLPREYVNARHCLP
 CHPECQPNQSGSVTCFGEADQCVACAHYKDPFCVARCPSGVKPDLSYMPIWKFPDEEGA
 CQPCPINCTHSCVDLDDKGPAPAEQRASPLTGCVSGDTIVMTSGGPRTVAELEGKPFATALI
 RGSYPCPSGFFRTCDRDVYDLRTREGHCLRLTHDHRVLMMDGGLWRAAGELERGDRLV
 MDDAAGEFPALATFRGLRGAGRDVYDATVYGASFTANGFIVHACGEQPGTGLNSGLTT
 NPGVSAWQVNTAYTAGQLVTYNGKTYKCLQPHTSLAGWEPNSVNPALWQLQ

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(ii)

ERBB2-AUTOCLEAVAGE

TQVCTGTMKRLRPASPETHLDMRLHYQGCVVQGNLELTYLPTNASLSFLQDIQEVQG
 YVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPTVTGASPGGLRELQL
 RSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQALTLIDTNRSRACHPCSPMCKGS
 RCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLFHNSG
 ICELHCPALVTYNTDTFESMPNPEGRTYTFGASCVTACPNYLSLTDVGSCTLVCPHNSG
 TAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKIFGSLAFLESFD
 GDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPLDSVFQNLQVIRGRILHNGAYS
 LTLQGLGISWLGLRSLRELGSGLAIHHNTHLCFVHTVPWDQLFRNPQALLHTANRPED
 ECVGEGLAHQLCARGHCWGPPTQCVNCSQFLRGQECVEECRVLQGLPREYVNARHCLP
 CHPECQPNQSGSVTCFGEADQCVACAHYKDPFCVARCPSGVKPDLSYMPIWKFPDEEGA
 CQPCPINCTHSCVDLDDKGPAPAEQRASPLTGCVSGDTIVMTSGGPRTVAELEGKPFATALI
 RGSYPCPSGFFRTCDRDVYDLRTREGHCLRLTHDHRVLMMDGGLWRAAGELERGDRLV
 MDDAAGEFPALATFRGLRGAGRDVYDATVYGASFTANGFIVHACGEQPGTGLNSGLTT
 NPGVSAWQVNTAYTAGQLVTYNGKTYKCLQPHTSLAGWEPNSVNPALWQLQ

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 120
 180
 240
 300
 360
 420
 480
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 720
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FIG. 49A

ERBB2 C-terminal-X-terminus (cont'd)

(iii) ERBB2-THIOESTER

TQVCTGTDMLRLPASPETHLDMLRHL YQGCVVQGNLELT YLPTNASLSFLQDIQEVQG 60
 YVLI AHNQVRQVPLQRLRIVRG TQL FEDNYALAVL DNGDPLNNTT PVTGASPGGLRELQL 120
 RSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTIDTNRSRACHPCSPMCKGS 180
 RCWGESSEDCQSLTRTV CAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHSG 240
 ICELHCPALVTYNTDTFESMPNPEGRTYTFGASCVTACPNYLSLTDVGSCTLVCPLHNQEV 300
 TAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLAFLPESFD 360
 GDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSL PDL SVFQNLQVIRGRILHNGAYS 420
 LTLQGLGISWLGLRSLRELSGLALIHNNTHLCFVHTVPWDQLFRNPHQALLHTANRPED 480
 ECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEECRVLQGLPREYVNARHCLP 540
 CHPECQPQNGSVTCFGPEADQCACAHYKDP PFCVARCP SGVKPDL SYMPIWKFPDEEGA 600
 CQPCPINCTHSCVDLDDKGCPAEQRASPLTX 631

(iv) ERBB2-X

TQVCTGTDMLRLPASPETHLDMLRHL YQGCVVQGNLELT YLPTNASLSFLQDIQEVQG 60
 YVLI AHNQVRQVPLQRLRIVRG TQL FEDNYALAVL DNGDPLNNTT PVTGASPGGLRELQL 120
 RSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTIDTNRSRACHPCSPMCKGS 180
 RCWGESSEDCQSLTRTV CAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHSG 240
 ICELHCPALVTYNTDTFESMPNPEGRTYTFGASCVTACPNYLSLTDVGSCTLVCPLHNQEV 300
 TAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLAFLPESFD 360
 GDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSL PDL SVFQNLQVIRGRILHNGAYS 420
 LTLQGLGISWLGLRSLRELSGLALIHNNTHLCFVHTVPWDQLFRNPHQALLHTANRPED 480
 ECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEECRVLQGLPREYVNARHCLP 540
 CHPECQPQNGSVTCFGPEADQCACAHYKDP PFCVARCP SGVKPDL SYMPIWKFPDEEGA 600
 CQPCPINCTHSCVDLDDKGCPAEQRASPLTGX 632

FIG. 49B

(i) **PRE-ERBB3-AUTOCLEAVAGE**

SEVGSQAVCPGTLNGLSVTGAENQYQTL^YKL^YERCEVVMGNLEIVL^TTGHNADLSFLQW
IREVTGYVLVAMNEFSTLPL^NLRVVRGTQVYDGKFAI^FVMLNYNTNSSHALRQLRLTQL
TEILSGGVYIEKNDKLC^HMDTIDWRDIVRDRDAEIVVKDGRSCPPCHEVCKGRCWGPGS
EDCQTLTKTICAPQCNGHCFFGNPNQCCHDECAGGCSGPQD^TCFACRHFNDSGACVPRC
PQPLVYNKLT^FQLEPNPHTKYQGVGVASCPHNFVVDQ^TSCVRACPPDKMEVDKNGLKM
CEPCGGLCPKACEGTGSGSRFQTV^DSSNIDGFVNCTKILGNLDFLITGLNGDPWHKIPAL
DPEKLNVRTVREITGYLNIQSWPPHMHNFVSFNL^TTIGGRSLYNRKGFSLIMKNLNV
SLGFRSLKEISAGRIYISANRQLCYH^SLNWTKVLRPT^EERLDIKHNRRRDCVAEGKV
CDPLCSSGGCWGPGGQCLSCRNYSRGGVCV^THCNFLNGEPREFAEAECEFSCHPECQPM
EGTATCNGSGSDTCAQCAHFRDGP^HCVSSCPHVLGAKGPIYKYPDVQNECRPCHENCTQ
GCKGPELQDCLGQTLVLIGK^THLTGCVSGDTI^VMTSGGPRTVAEELEGPFTALIRSGYP
CPSGFFRTCERDVYDLRTREGHCLRL^THDHRLVMDGGLEWRAAGELERGDRLVMDDAAG
EFPALATFRGLRGAGRDVYDATVYGASAF^TANGFIVHACGEQPGTGLNSGLTTNPGVSA
WQVNTAYTAGQLVTYNGKTYKCLQ^PHTSLAGWEPNSVPALWQLQ

(ii)

ERBB3-AUTOCLEAVAGE

SEVGSQAVCPGTLNGLSVTGD AENQYQTL YKLYERCEVVMGNLEIVLTGHNADLSFLQW
IREVTGYVLVAMNEFSTLPLNLRVVRGTQVYDGKFAIFVMLNYNTNSSHALRQLRTLQ
TEILSGGVYIEKNDKLCHMDTIIDWRDIVRDRAEIVVKDNGRSCPPCHEVCKGRCWGPGS
EDCQTLTKTICAPQCNHGHCFFGNPNQCCHDECAGGCSGPQDTCFACRHFNDSGACVPRC
PQPLVYNKLTFOLEPNPHTKYQYGGVCVASCPHNFVVDQTSVCRACPPDKMEVDKNGLKM
CEPCGGLCPKACEGTGSGSRFQTVDSNNIDGFVNCTKILGNLDFLITGLNGDPWHKIPAL
DPEKLNVRFTVRITGYLNIQSWPPHMHNFVSFNLTTIGGRSLYNRGFSLLIMKNLNV
SLGFRSLKEISAGRIYISANRQLCYHHSLSVTKVLRTGPREDFDIKHNRRDRDVAEGKV
CDPLCSSGGCWGPGGQCLSCRNYSRGGVCVTHCNFLNGEPREFFAHEAECSCHPECQPM
EGTATCNGSGSDTCAQCAHFRDGPCHVCSSCPHGVLAGKPIYKYPDVQNECRPCHENCTQ
GCKGPELQDCLGQTLVLIQKTHLTGCVSGDTIVMTSGGPRTVAELEGKPTALIRSGYP
CPSGFFRTCERDVYDLRTREGHCLRLTHDHRVLVMDGGLEWRAAGELERGRDLVMDDAAG
EFPALATFRGLRGAGRQDVYDATVYGASAFANGFIVHACGEQPGTGLNSGLTTNPGVSA
WQVNTAYTAGQLVTYNGKTYKCLQPHTSLAGWEPNSVPALWQLQ

FIG. 50A

ERBB3 C-terminal-X-terminus (cont'd)

(iii)

ERBB3-THIOESTER

SEVNSQAVCPGTLNGLSVTGDAENQYQTL YKLYERCEVVMGNLEIVLTGHNADLSFLQW 60
 IREVTGYVLVAMNEFSTLPLNLRVVRGTQVYDGKFAIFVMLNYNTNSSHALRQLRLTQL 120
 TEILSGGVYIEKNDKLCCHMDTIDWRDIVRDRDAEIVVKDNGRSCPPCHEVCKGRCWGP GS 180
 EDCQTLTKTICAPQCNGHCFGNPNQCCDEAGGSGPQDTCDFACRHFNDSGACVPRC 240
 PQPLVYNKLT FQLEPNPHTKYQYGGVCVASCAPHNFVVDQTSVCRACPPDKMEVDKNGLKM 300
 CEPCCGLCPKACEGTGSGSRFQTVDSNIDGFVNCTKILGNLDFLITGLNGDPWHKIPAL 360
 DPEKLNVRTVREITGYLNIQSWPPHMHNFVSFNLTTIGRSLYNRGFSLLIMKNLNV 420
 SLGFRSLKEISAGRIYISANRQLCYHHSLNWTKVLRGPTTEERLDIKHNRRDCVAEGKV 480
 CDPLCSSGGCWGPQGQCLSCRNYSRGGVCVTHCNFLNGEPREFAEAECSCHPECCQM 540
 EGTATCNGSGSDTCAQCAHFRDGPCHCVSSCPHGVLGAKGPIYKYPDVQNECRPCHENCTQ 600
 GCKGPELQDCLGQTLVLIGKTHLTX 625

(iv)

ERBB3-X

SEVNSQAVCPGTLNGLSVTGDAENQYQTL YKLYERCEVVMGNLEIVLTGHNADLSFLQW 60
 IREVTGYVLVAMNEFSTLPLNLRVVRGTQVYDGKFAIFVMLNYNTNSSHALRQLRLTQL 120
 TEILSGGVYIEKNDKLCCHMDTIDWRDIVRDRDAEIVVKDNGRSCPPCHEVCKGRCWGP GS 180
 EDCQTLTKTICAPQCNGHCFGNPNQCCDEAGGSGPQDTCDFACRHFNDSGACVPRC 240
 PQPLVYNKLT FQLEPNPHTKYQYGGVCVASCAPHNFVVDQTSVCRACPPDKMEVDKNGLKM 300
 CEPCCGLCPKACEGTGSGSRFQTVDSNIDGFVNCTKILGNLDFLITGLNGDPWHKIPAL 360
 DPEKLNVRTVREITGYLNIQSWPPHMHNFVSFNLTTIGRSLYNRGFSLLIMKNLNV 420
 SLGFRSLKEISAGRIYISANRQLCYHHSLNWTKVLRGPTTEERLDIKHNRRDCVAEGKV 480
 CDPLCSSGGCWGPQGQCLSCRNYSRGGVCVTHCNFLNGEPREFAEAECSCHPECCQM 540
 EGTATCNGSGSDTCAQCAHFRDGPCHCVSSCPHGVLGAKGPIYKYPDVQNECRPCHENCTQ 600
 GCKGPELQDCLGQTLVLIGKTHLTX 626

FIG. 50B

ERBB4 C-terminal-X-terminus

(i) PRE-ERBB4-AUTOCLEAVAGE

QSV CAGTENKLSLSDLEQQYRALRKYYENCEVVMGNLEITTSIEHNRDLSFLRSVREVTG
 YVLVALNQFRYLPLENRIIRGTLKYEDRYALAIFLNRYKDGNGFLGLKNLTEILNG
 GVYVDQNKFLCYADTIHWQDIVRNPWPSNLTIVSTNGSSGGRCHKSCGTGRGWPTENHC
 QTLTRTVCAEQCDGRGYPVSDCCCHRECAGGSGPKDTCFACMNFNDSGACVTQCPQT
 FVYNPTTFQLEHNFNAKYTYGAFCKKCPHNFVVDSSSCVRACPPSSKMEVEENGIMCKP
 CTDICPKACDGIGTGLMSAQTVDSNIDKFINCTKINGNLI FLVTGIHGDPYNAIEAID
 PEKLNVFRTVREITGFLNIQSWPPNMTDFSVFSLVTIGGRVLYSGLSLLILKQQGITSL
 QFQSLKEISAGNIYITDNSNLCYYHTINWTTLFSTINQIRIVIRDNRAENCTAEGMVCNH
 LCSSDGCWGPDPQCLSCRRFSRGRICIESCNLYDGEFREFENGSI CVECDPQCEKMEDG
 LLTCHGPGPDNCTKSHFKDGNPCVEKCPDGLQGANSFIKYPADPDRECHPCHPNCQTQGC
 NGPTSHDCIYYPWTGHSTLPQHARTPGCVSGDTIVMTSGGPRTVAELEGKPF TALIRGSG
 YPCPSGFFRT CERDVYDLRTREGHCLRLTHDHRVLMDDGLEWRAAGELERGDRLVMDDA
 AGEFPALATFRGLRGAGRQDVYDATVYGASAFANGFIVHACGEQPGTGLNSGLTTNPGV
 SAWQVNTAYTAGQLVTYNGKTYKCLQPHTS LAGWEP SNVPALWQLQ

MKPATGLWVWSLLVAAAGTVQPSPDS
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 60
 120
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(ii)

ERBB4-AUTOCLEAVAGE

QSV CAGTENKLSLSDLEQQYRALRKYYENCEVVMGNLEITTSIEHNRDLSFLRSVREVTG
 YVLVALNQFRYLPLENRIIRGTLKYEDRYALAIFLNRYKDGNGFLGLKNLTEILNG
 GVYVDQNKFLCYADTIHWQDIVRNPWPSNLTIVSTNGSSGGRCHKSCGTGRGWPTENHC
 QTLTRTVCAEQCDGRGYPVSDCCCHRECAGGSGPKDTCFACMNFNDSGACVTQCPQT
 FVYNPTTFQLEHNFNAKYTYGAFCKKCPHNFVVDSSSCVRACPPSSKMEVEENGIMCKP
 CTDICPKACDGIGTGLMSAQTVDSNIDKFINCTKINGNLI FLVTGIHGDPYNAIEAID
 PEKLNVFRTVREITGFLNIQSWPPNMTDFSVFSLVTIGGRVLYSGLSLLILKQQGITSL
 QFQSLKEISAGNIYITDNSNLCYYHTINWTTLFSTINQIRIVIRDNRAENCTAEGMVCNH
 LCSSDGCWGPDPQCLSCRRFSRGRICIESCNLYDGEFREFENGSI CVECDPQCEKMEDG
 LLTCHGPGPDNCTKSHFKDGNPCVEKCPDGLQGANSFIKYPADPDRECHPCHPNCQTQGC
 NGPTSHDCIYYPWTGHSTLPQHARTPGCVSGDTIVMTSGGPRTVAELEGKPF TALIRGSG
 YPCPSGFFRT CERDVYDLRTREGHCLRLTHDHRVLMDDGLEWRAAGELERGDRLVMDDA
 AGEFPALATFRGLRGAGRQDVYDATVYGASAFANGFIVHACGEQPGTGLNSGLTTNPGV
 SAWQVNTAYTAGQLVTYNGKTYKCLQPHTS LAGWEP SNVPALWQLQ

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FIG. 51A

ERBB4 C-terminal-X-terminus (cont'd)

(iii) ERBB4-THIOESTER

QSV CAGTENKLSLSDLEQQYRALRKYYENCEVVMGNLEITSIEHNRDLSFLRSVREVTG 60
 YVLVALNQFRYLPLENRIIRGTLKYEDRYALAIFLNRYKDGNGFLQELGLKNL TEILNG 120
 GVVVDQNKFLCYADTIHWQDIVRNWPNSNLTIVSTNGSSGGRCHKSGCTGRCWGPTENHC 180
 QTLTRTVCAEQDGRGYPYVSDCCCHRECAGGSGPKDTCFACMNFNDSGACVTQCPQT 240
 FVYNPTTFQLEHNFNAKYTYGAFCKKCPHNFVVDSSSCVRACPSKMEVEENGIMCKP 300
 CTDICPKACDGIGTGSLMSAQTVDSNIDKFINCTKINGNLI FLVTGIHGDPYNAIEAID 360
 PEKLNVRTVREITGFLNIQSWPPNMTDFSVFNSLVTIGGRVLYSGLSLLILKQQGITSL 420
 QFQSLKEISAGNIYITDNSNLCYYHTINWTTLFSTINQRIVIRDNRKAENCTAEGMVCNH 480
 LCSSDGCWGGPDQCLSCRRFSRGRICIESCNLYDGEFREFENGSI CVECDPQCEKMEDG 540
 LLTCHGPGPDNCTKCSHFKDGPNCVEKCPDGLQGANSFIFKYADPDRECHPCHPNCTQGC 600
 NGPTSHDCIYYPWTGHSTLPQHARTPX 627

(iv) ERBB4-X

QSV CAGTENKLSLSDLEQQYRALRKYYENCEVVMGNLEITSIEHNRDLSFLRSVREVTG 60
 YVLVALNQFRYLPLENRIIRGTLKYEDRYALAIFLNRYKDGNGFLQELGLKNL TEILNG 120
 GVVVDQNKFLCYADTIHWQDIVRNWPNSNLTIVSTNGSSGGRCHKSGCTGRCWGPTENHC 180
 QTLTRTVCAEQDGRGYPYVSDCCCHRECAGGSGPKDTCFACMNFNDSGACVTQCPQT 240
 FVYNPTTFQLEHNFNAKYTYGAFCKKCPHNFVVDSSSCVRACPSKMEVEENGIMCKP 300
 CTDICPKACDGIGTGSLMSAQTVDSNIDKFINCTKINGNLI FLVTGIHGDPYNAIEAID 360
 PEKLNVRTVREITGFLNIQSWPPNMTDFSVFNSLVTIGGRVLYSGLSLLILKQQGITSL 420
 QFQSLKEISAGNIYITDNSNLCYYHTINWTTLFSTINQRIVIRDNRKAENCTAEGMVCNH 480
 LCSSDGCWGGPDQCLSCRRFSRGRICIESCNLYDGEFREFENGSI CVECDPQCEKMEDG 540
 LLTCHGPGPDNCTKCSHFKDGPNCVEKCPDGLQGANSFIFKYADPDRECHPCHPNCTQGC 600
 NGPTSHDCIYYPWTGHSTLPQHARTPGX 628

FIG. 51B

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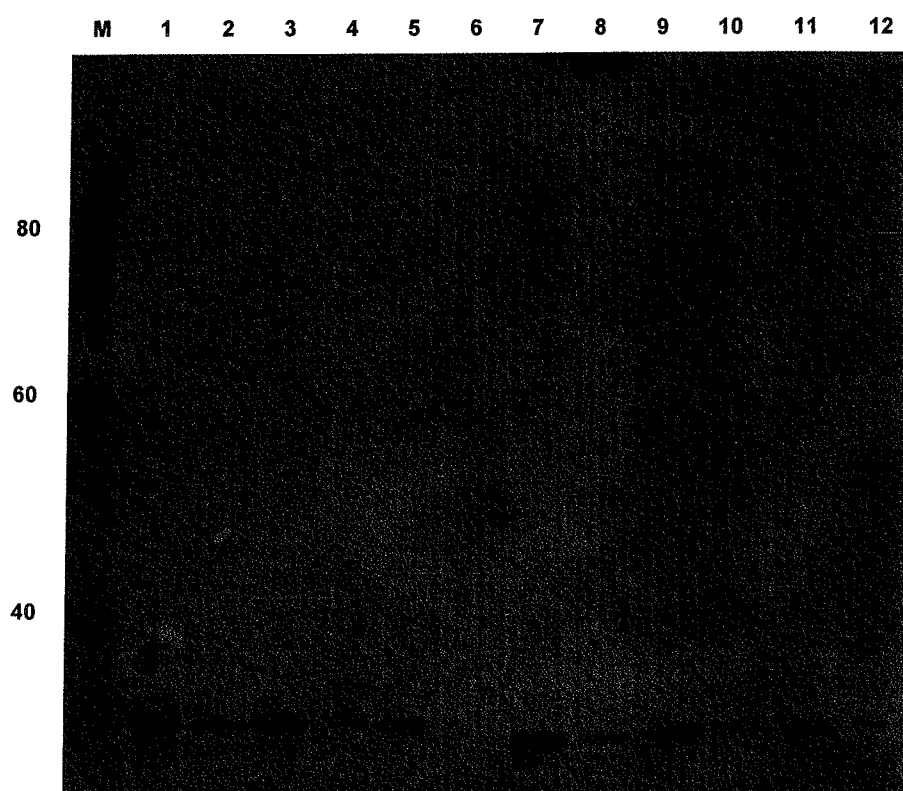


FIG. 52

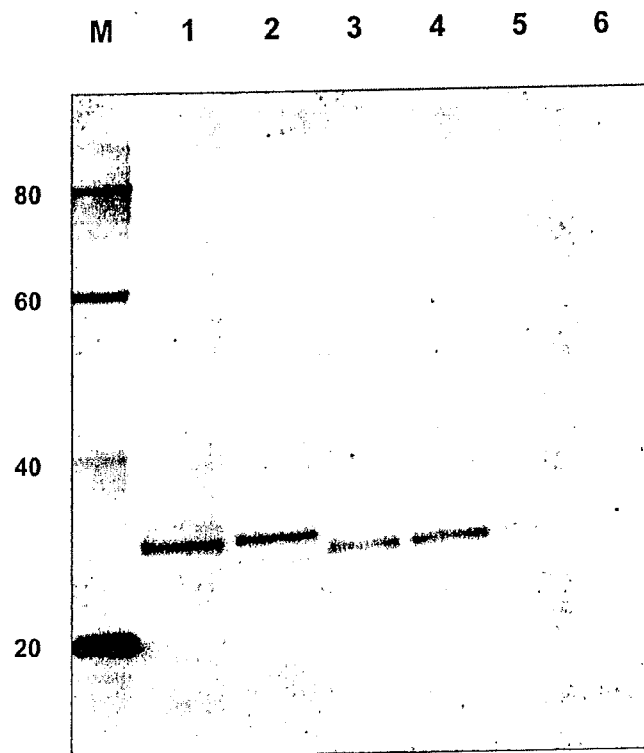


FIG. 53

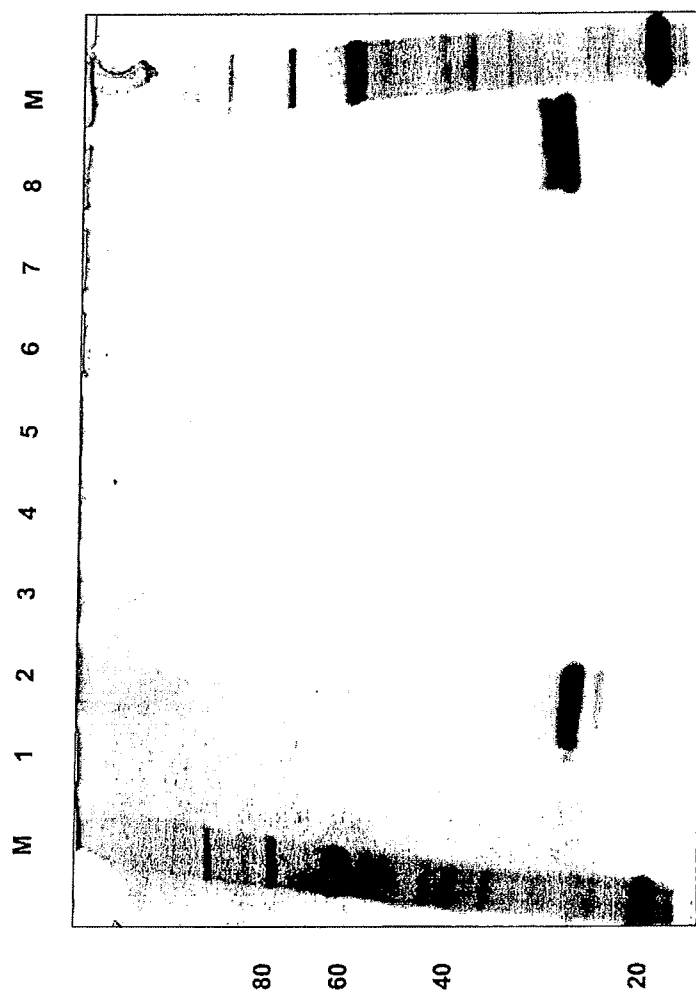


FIG. 54

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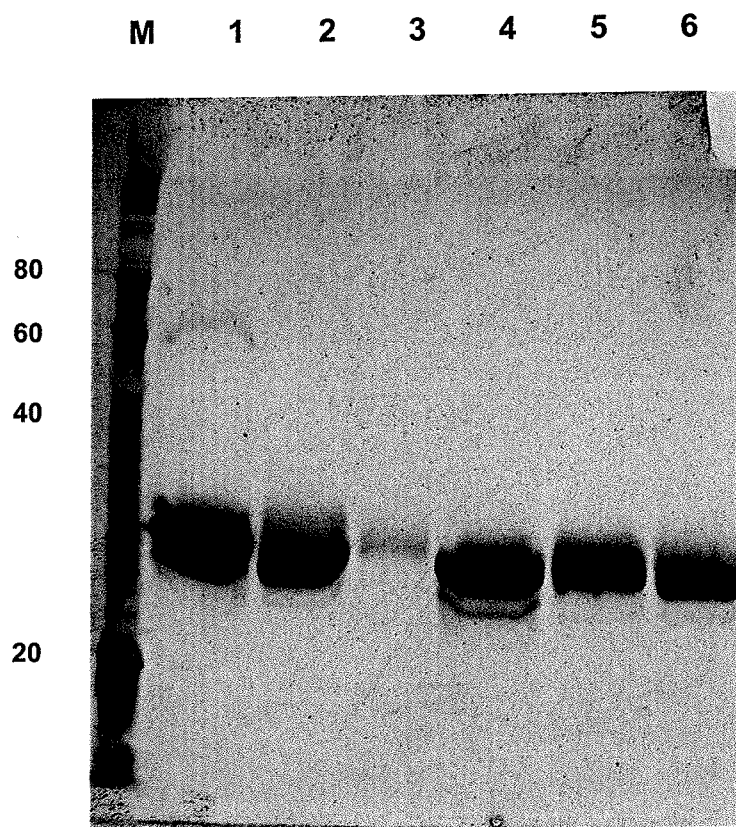


Fig. 55

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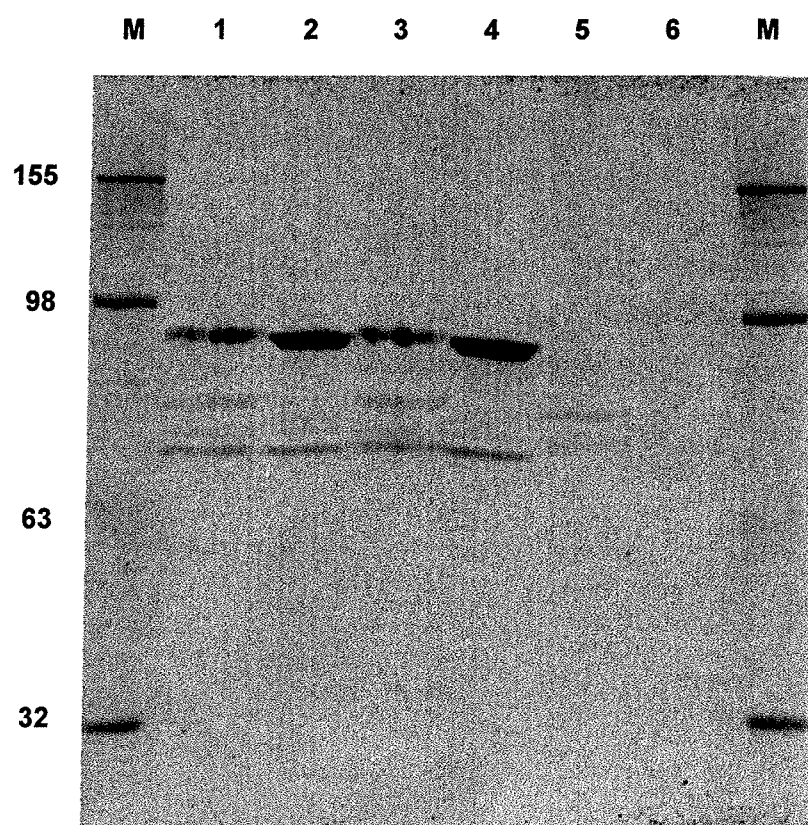
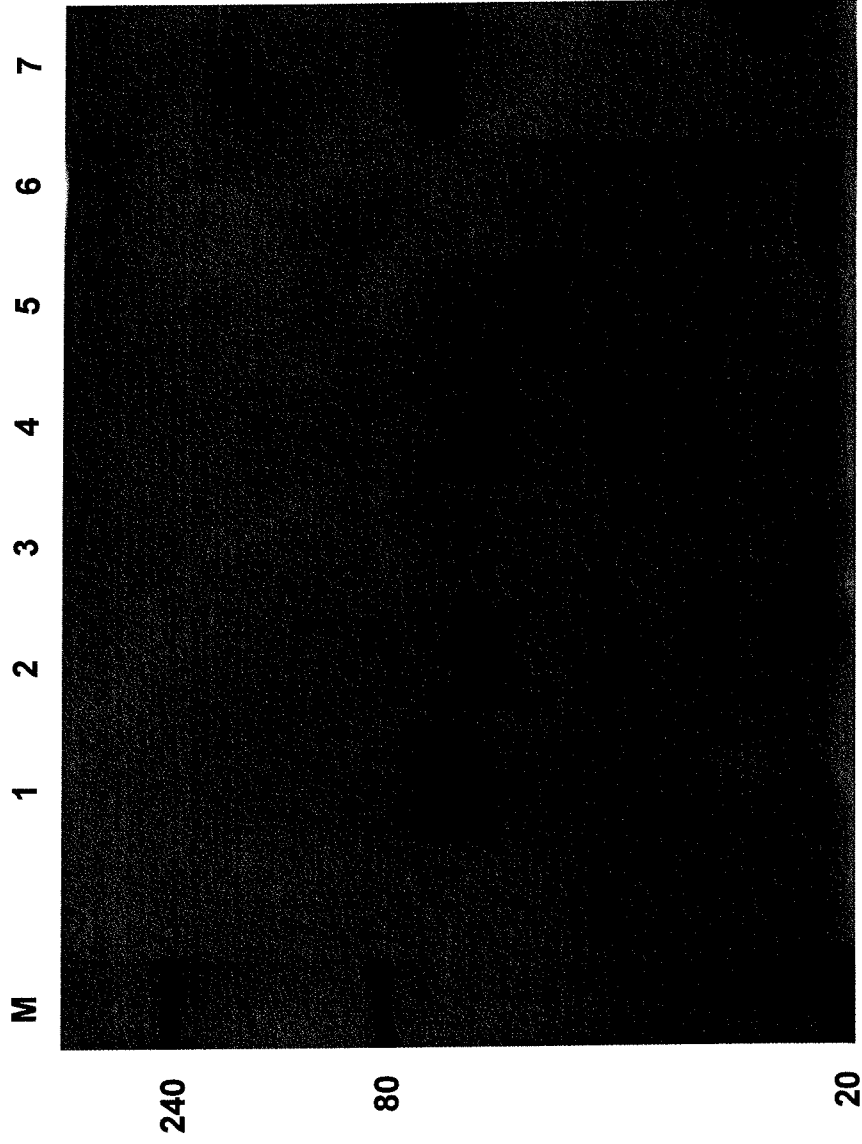


FIG. 56



M 1 2 3 4 5 6 7

240

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FIG. 57

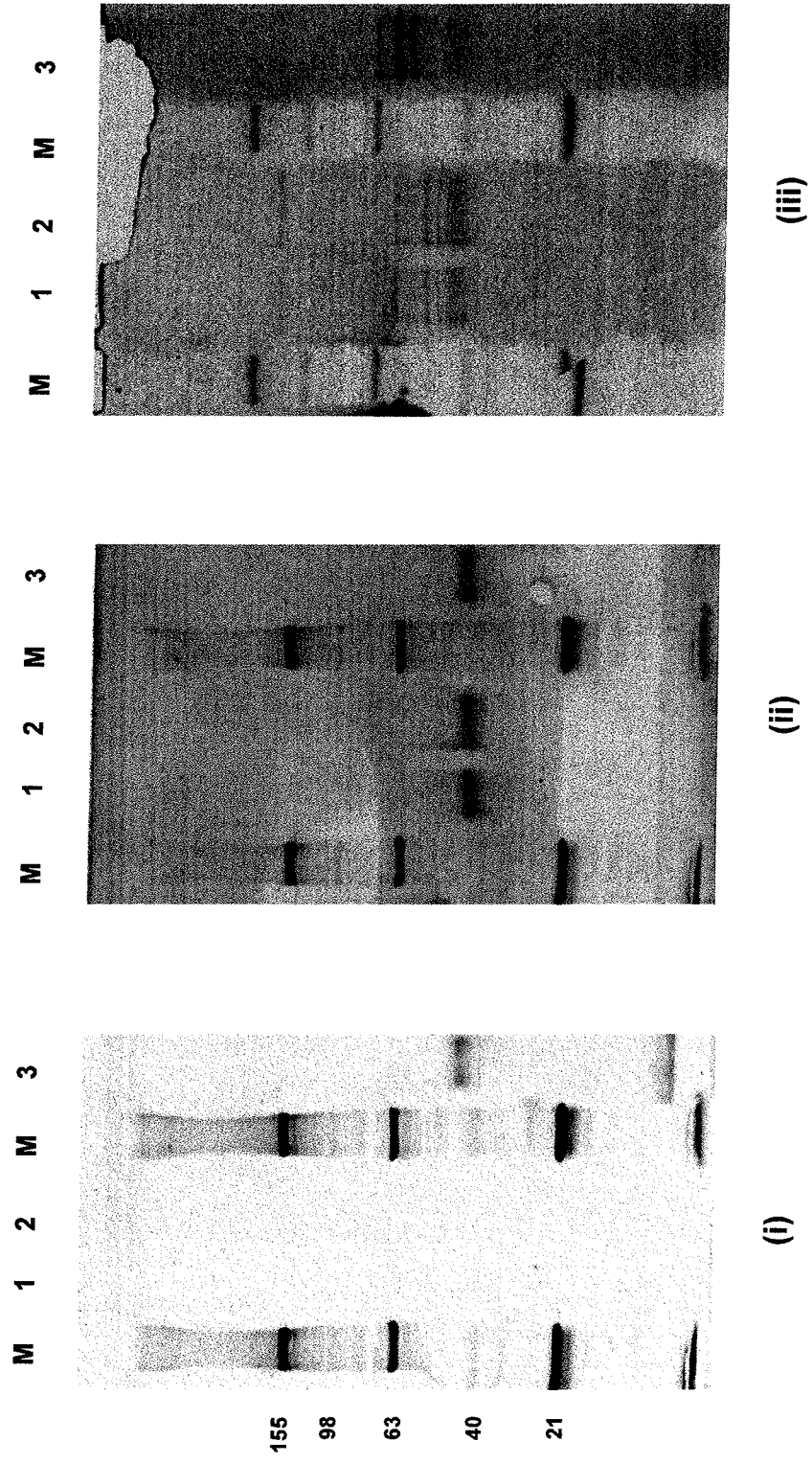


Fig. 58

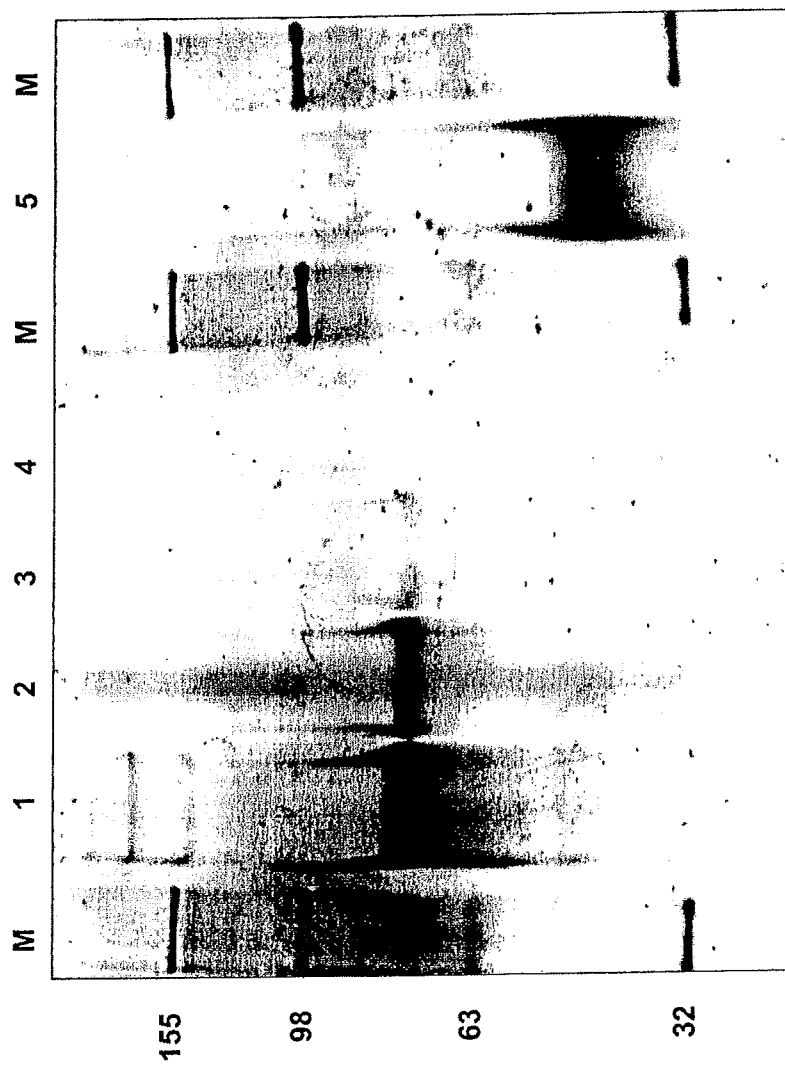


FIG. 59

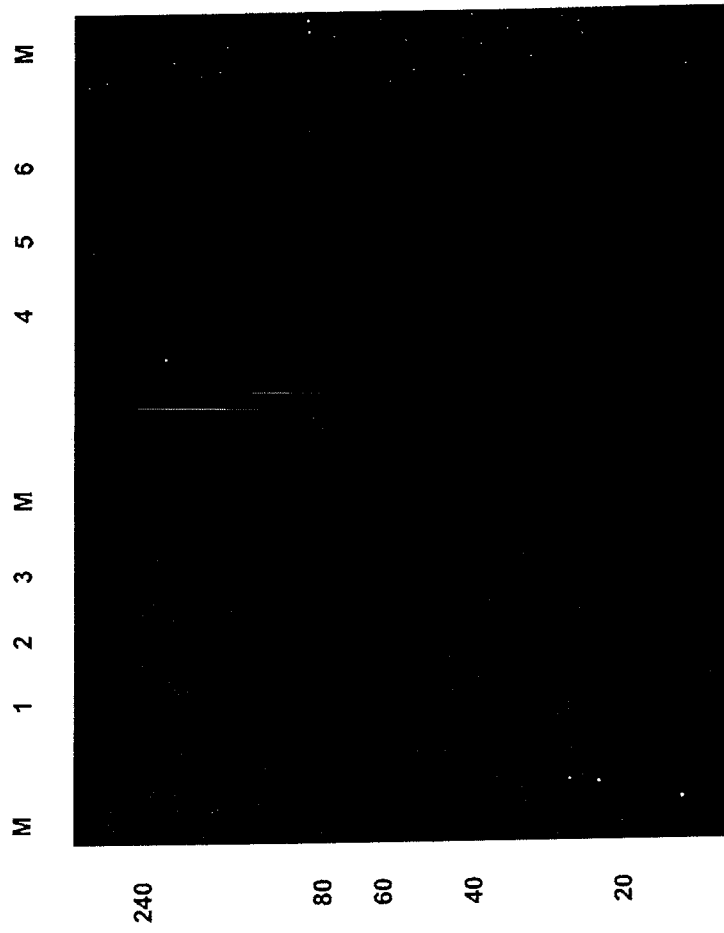


FIG.60

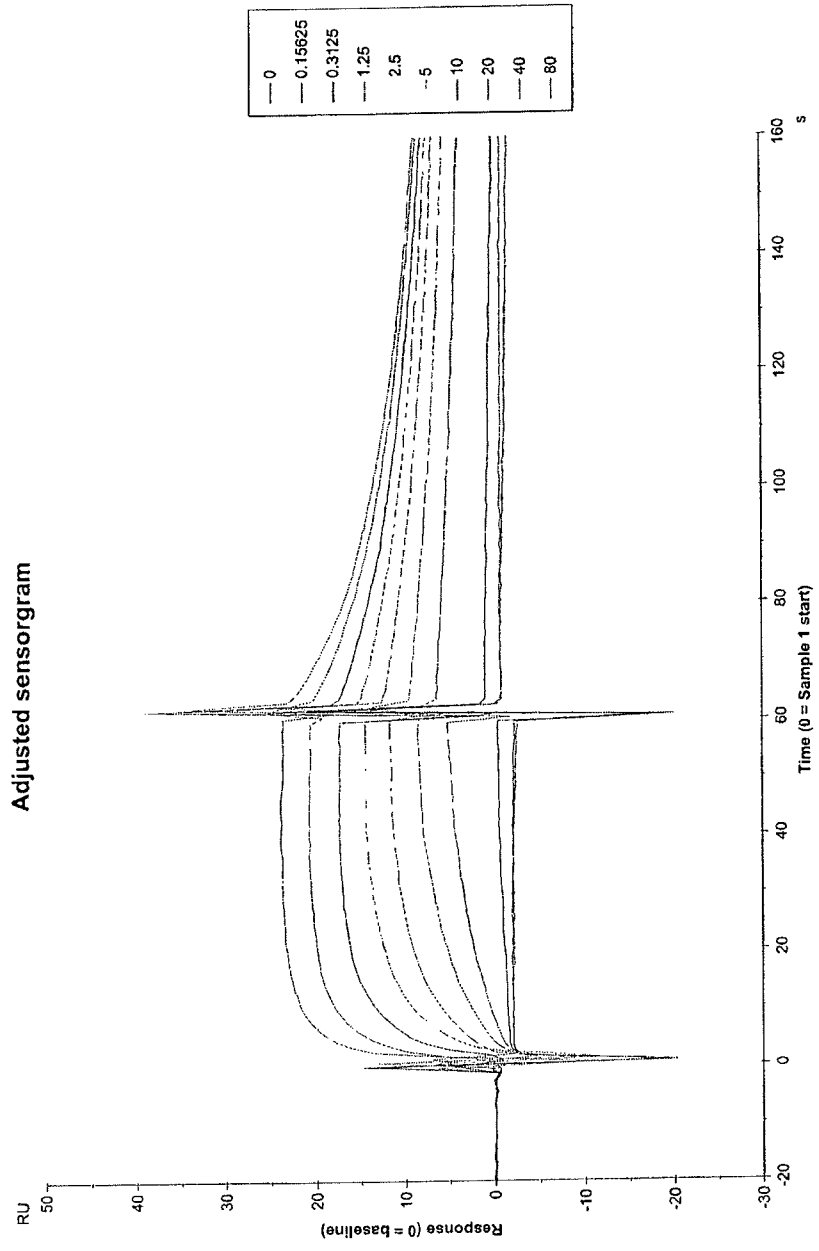


FIG. 61A

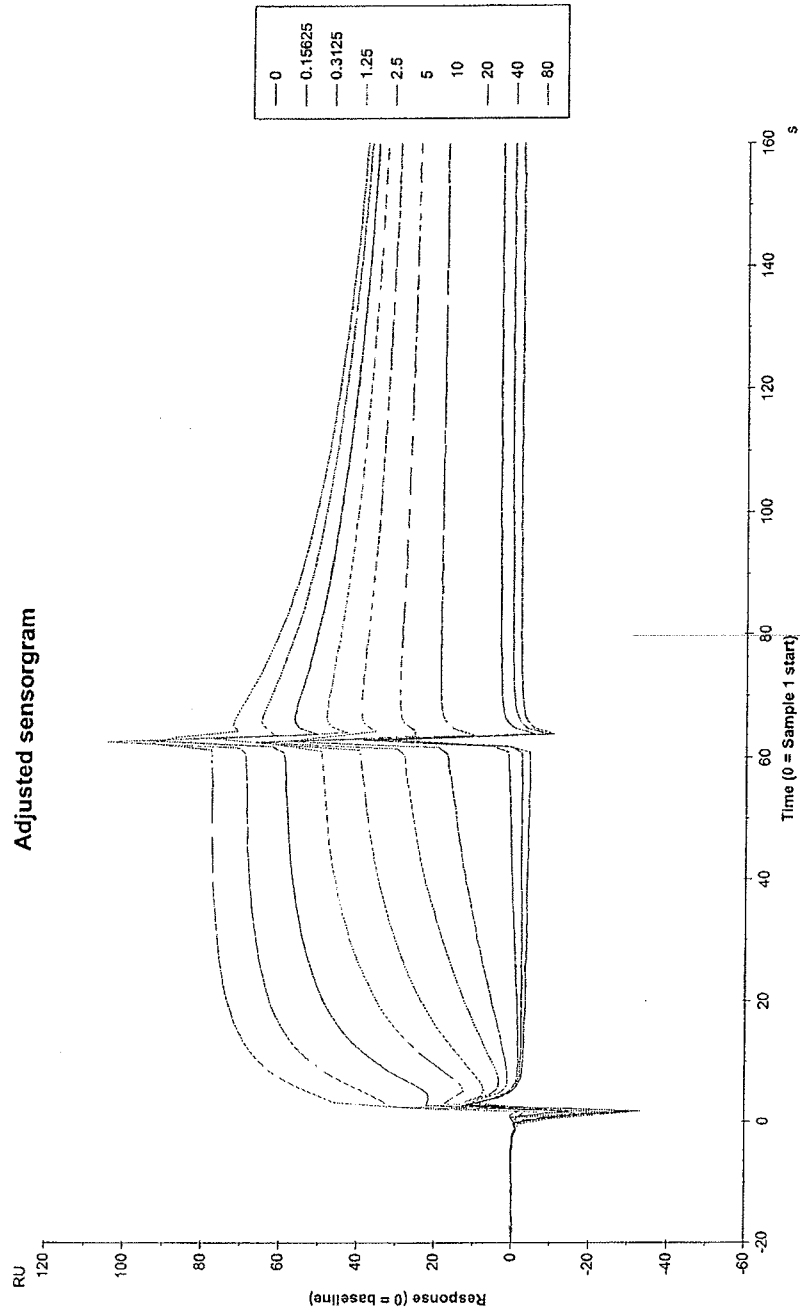


Fig. 61B

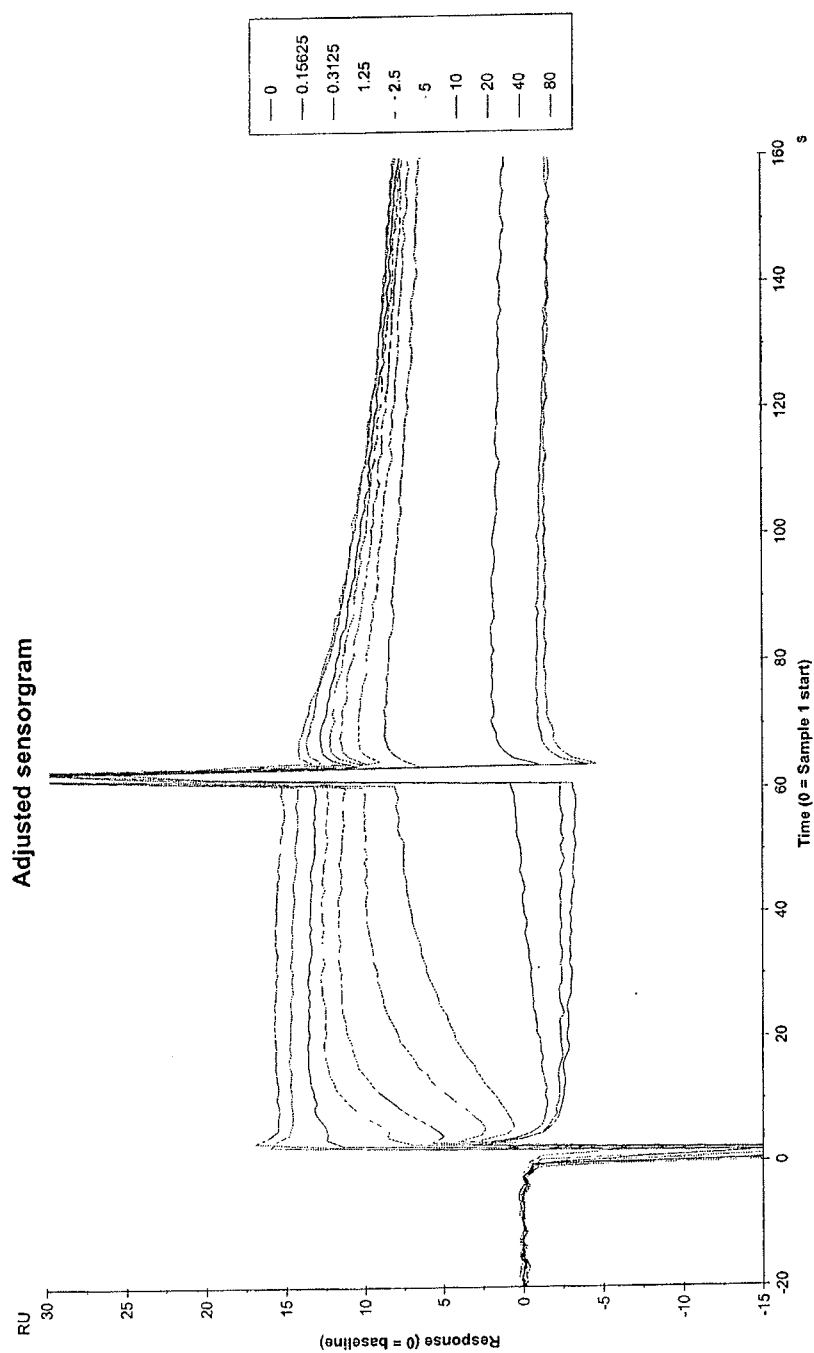


Fig. 61C

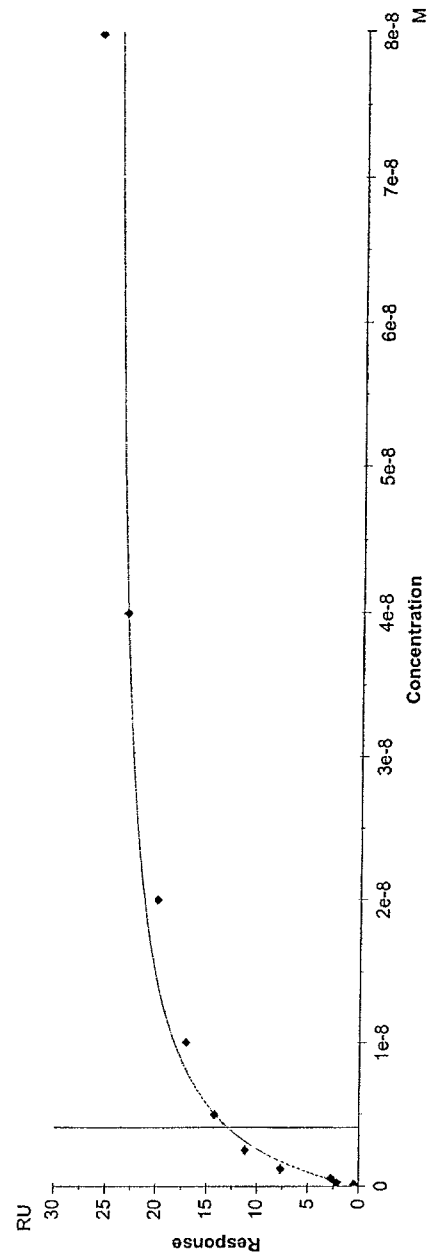


FIG. 62A

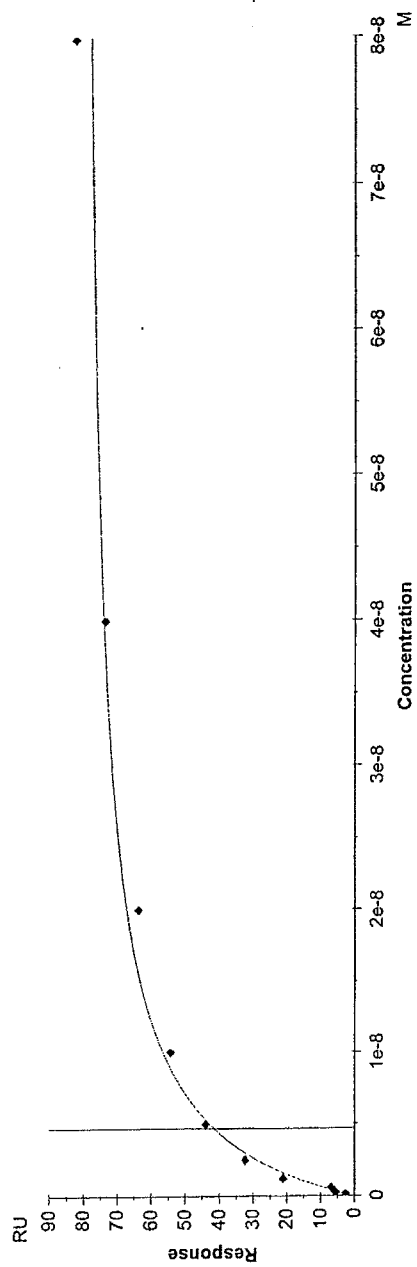


FIG. 62B

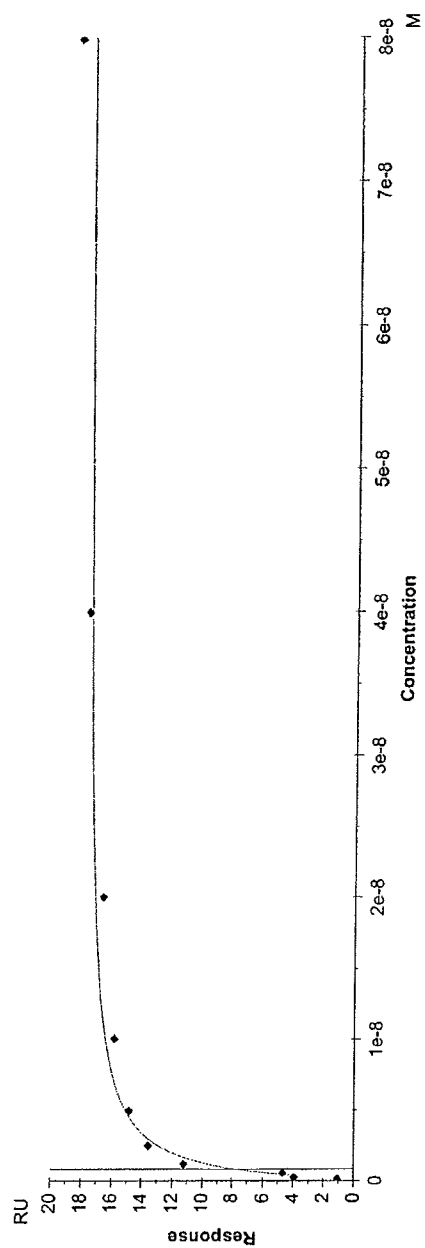


FIG. 62C