

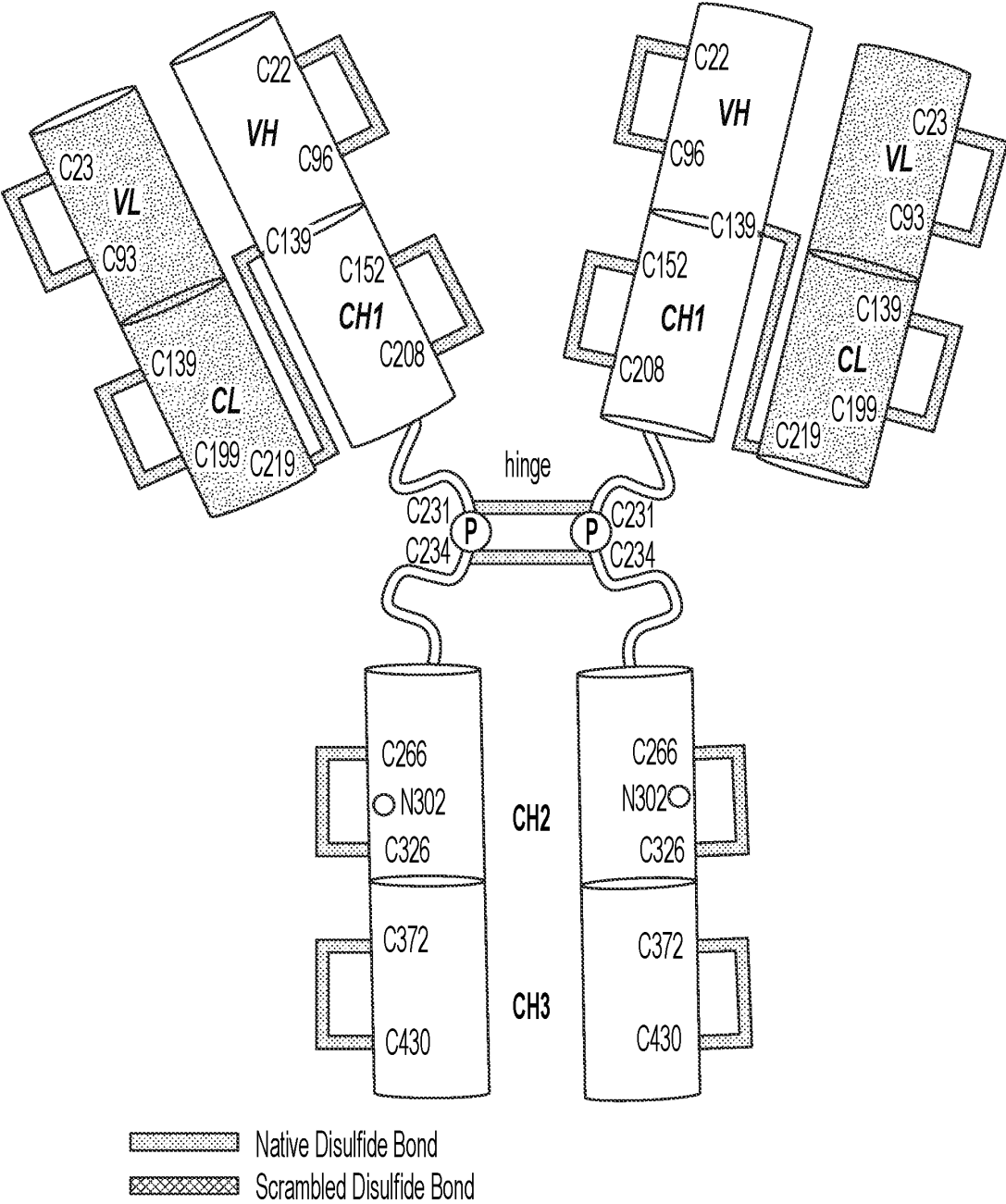


FIG.1A

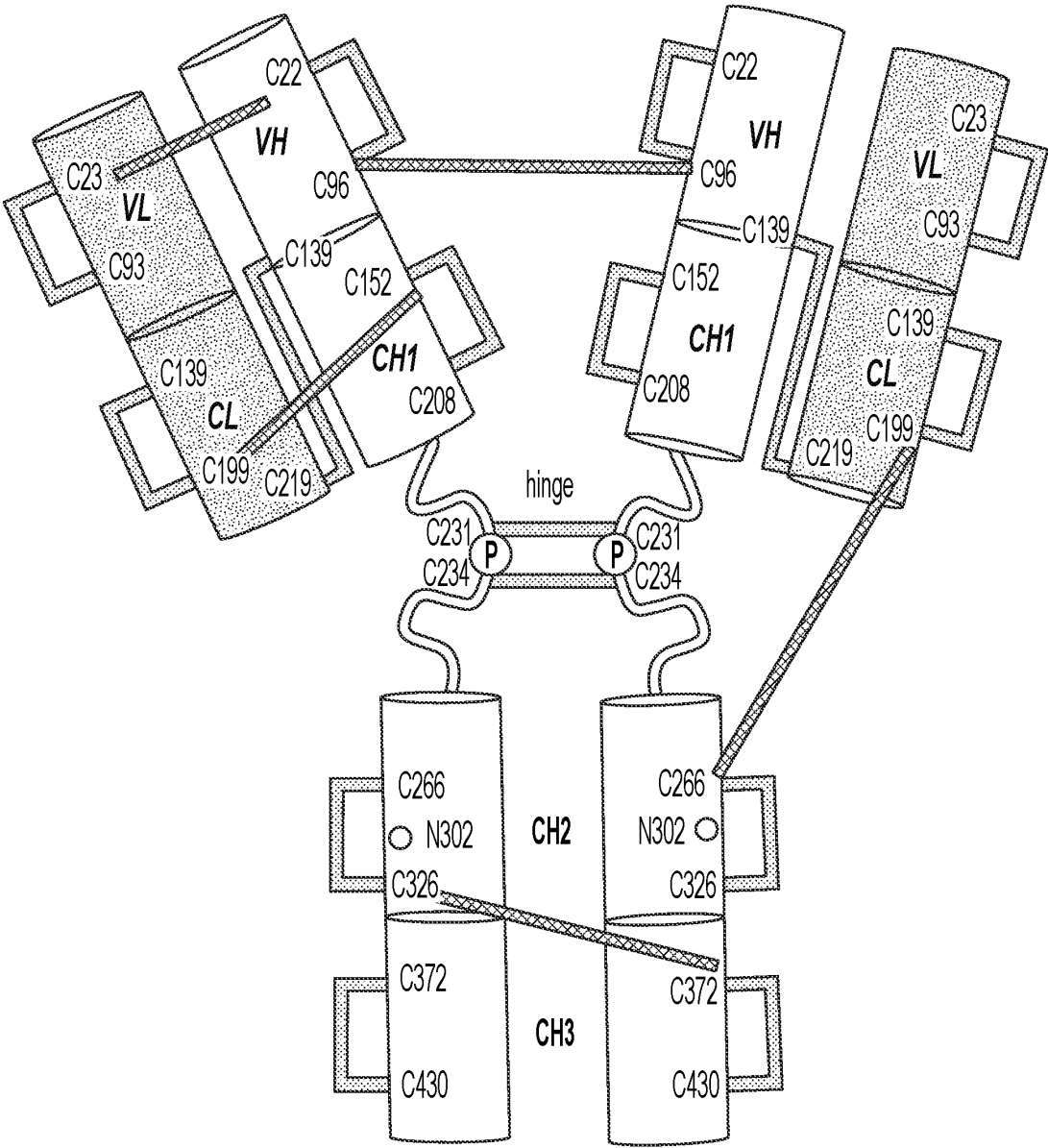


FIG.1A CONT.

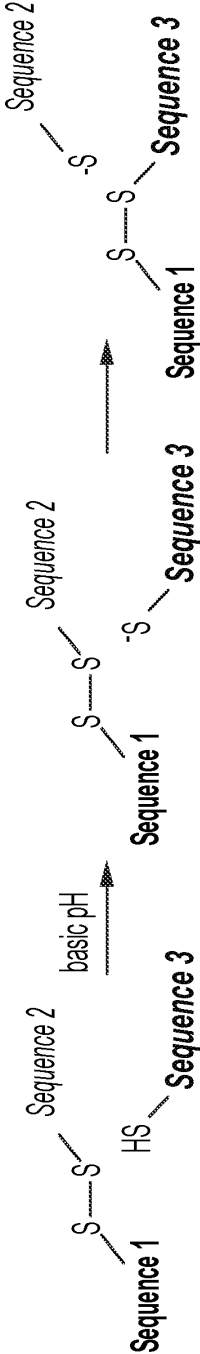


FIG. 1B

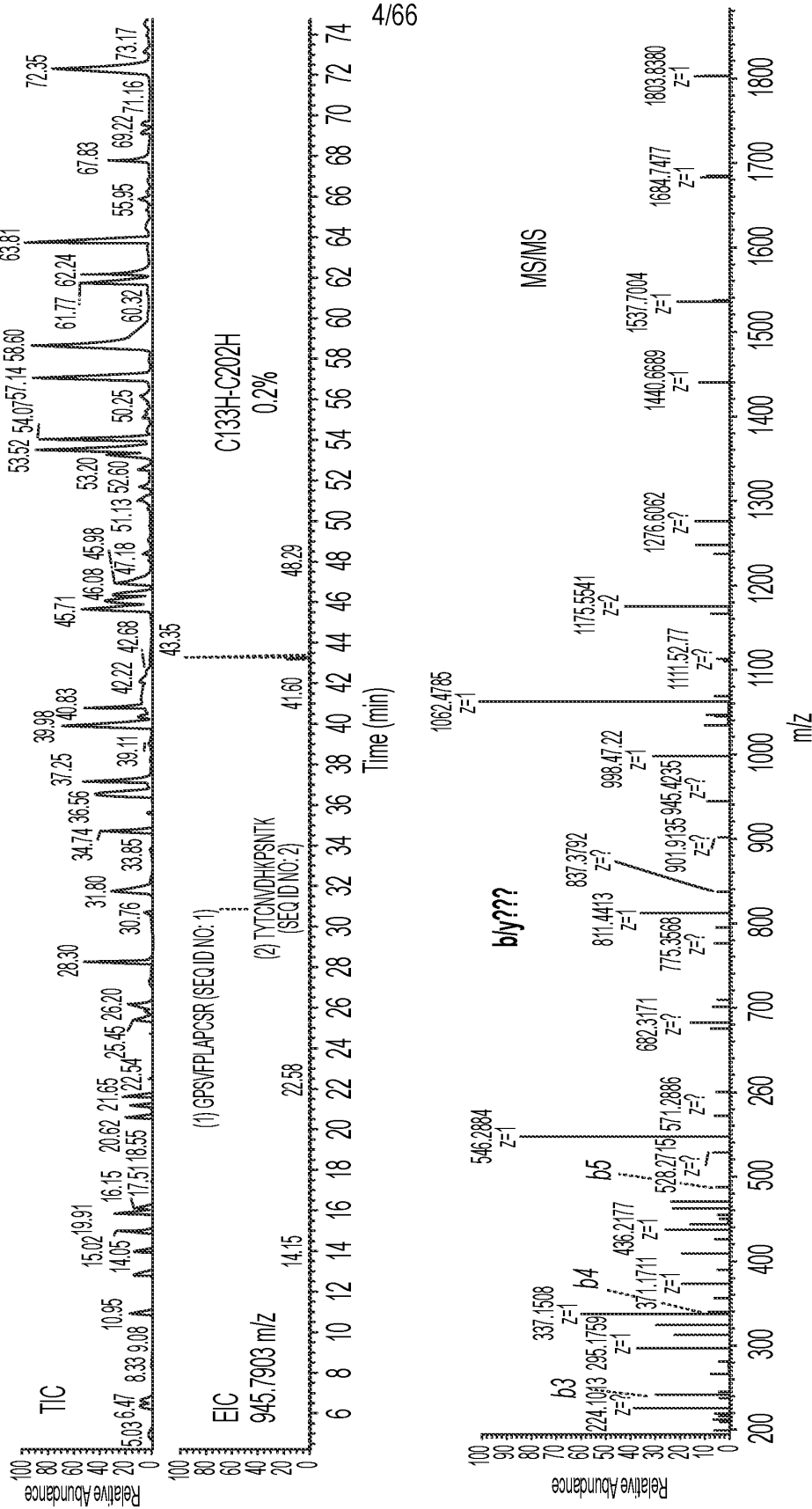


FIG. 2

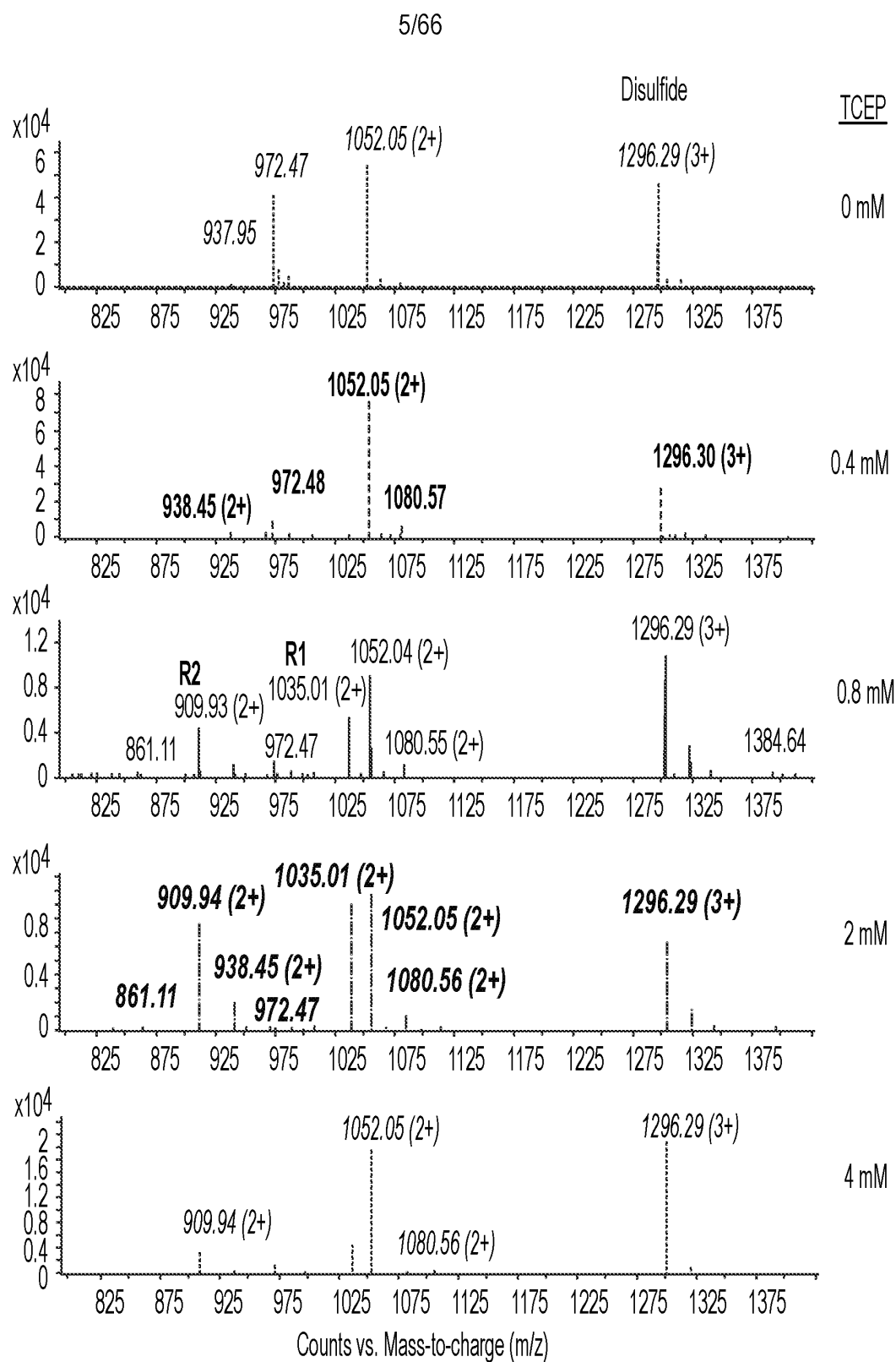


FIG. 3

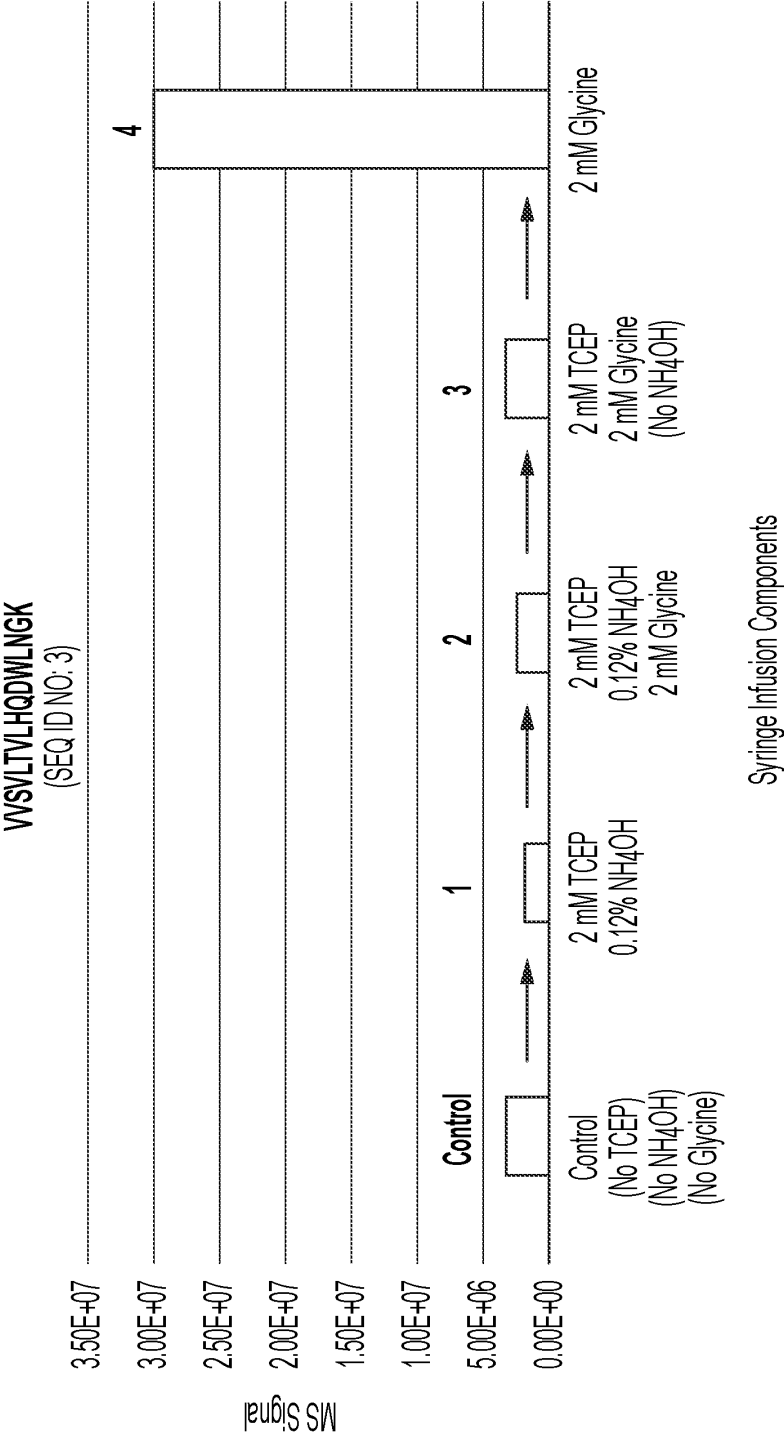


FIG. 4

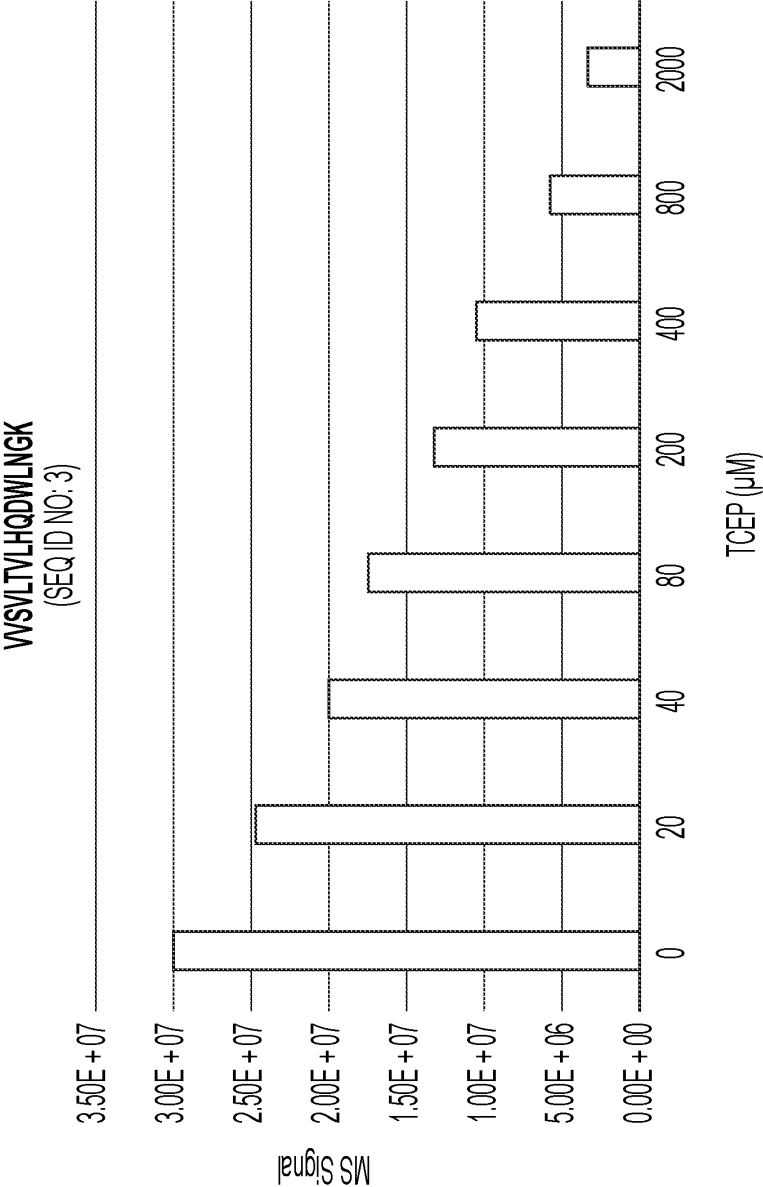


FIG. 5A

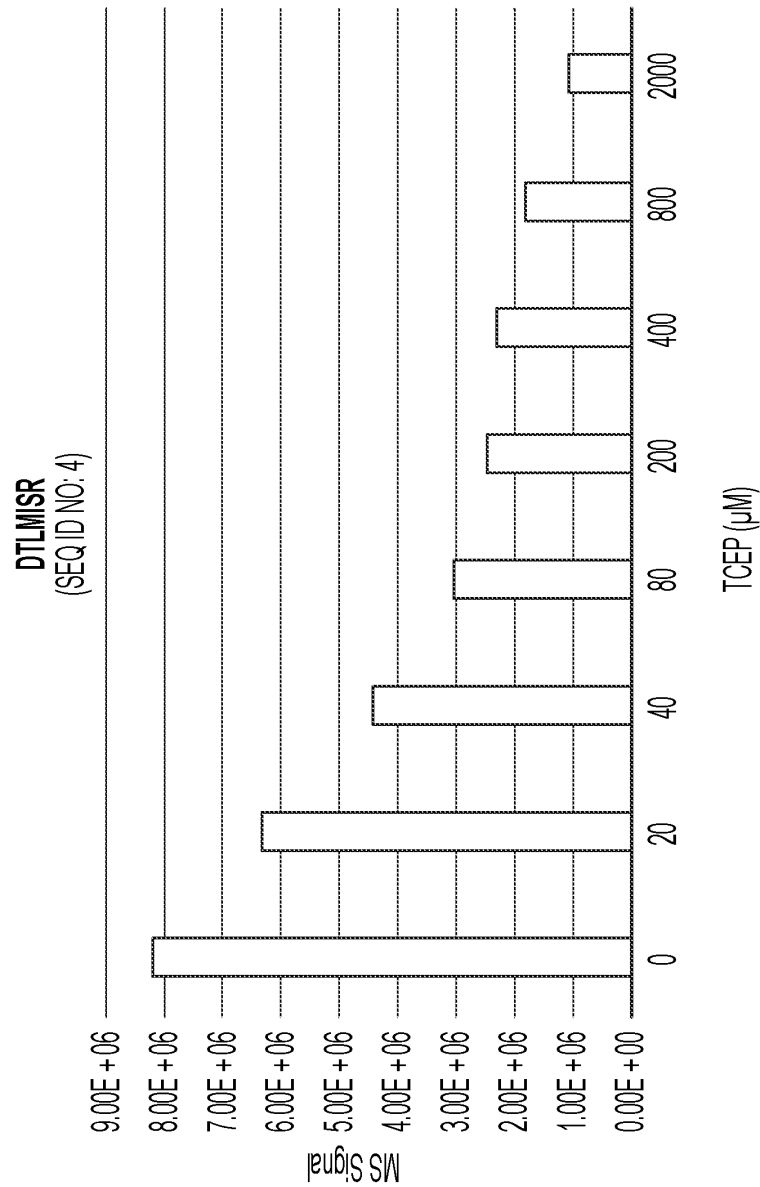


FIG. 5B

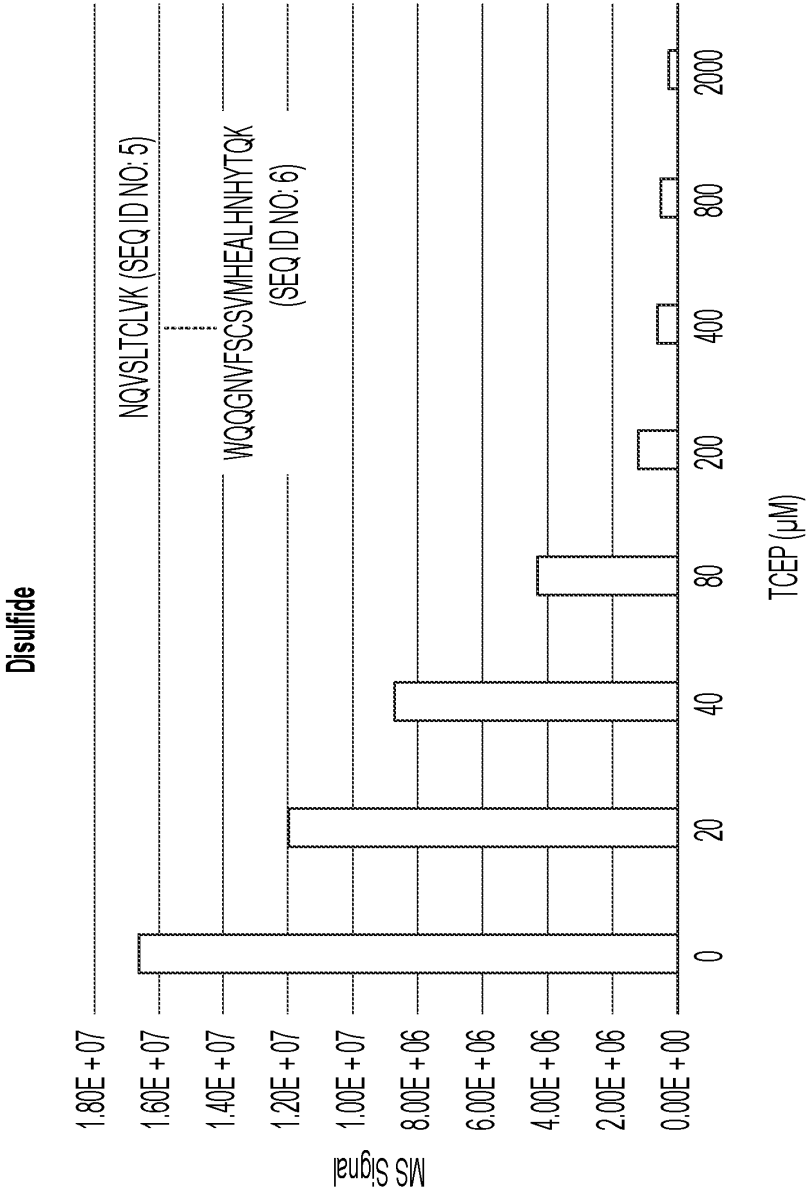


FIG. 6A

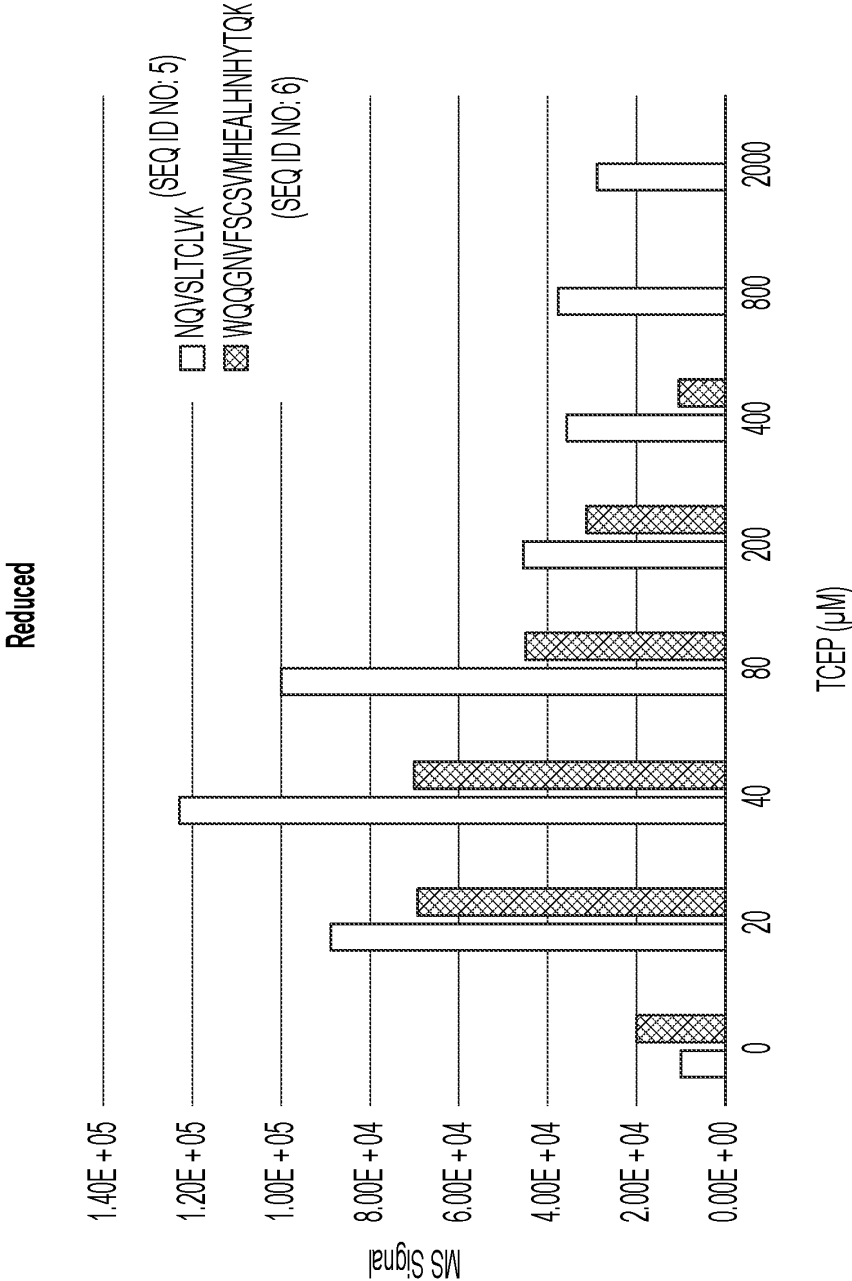


FIG. 6B

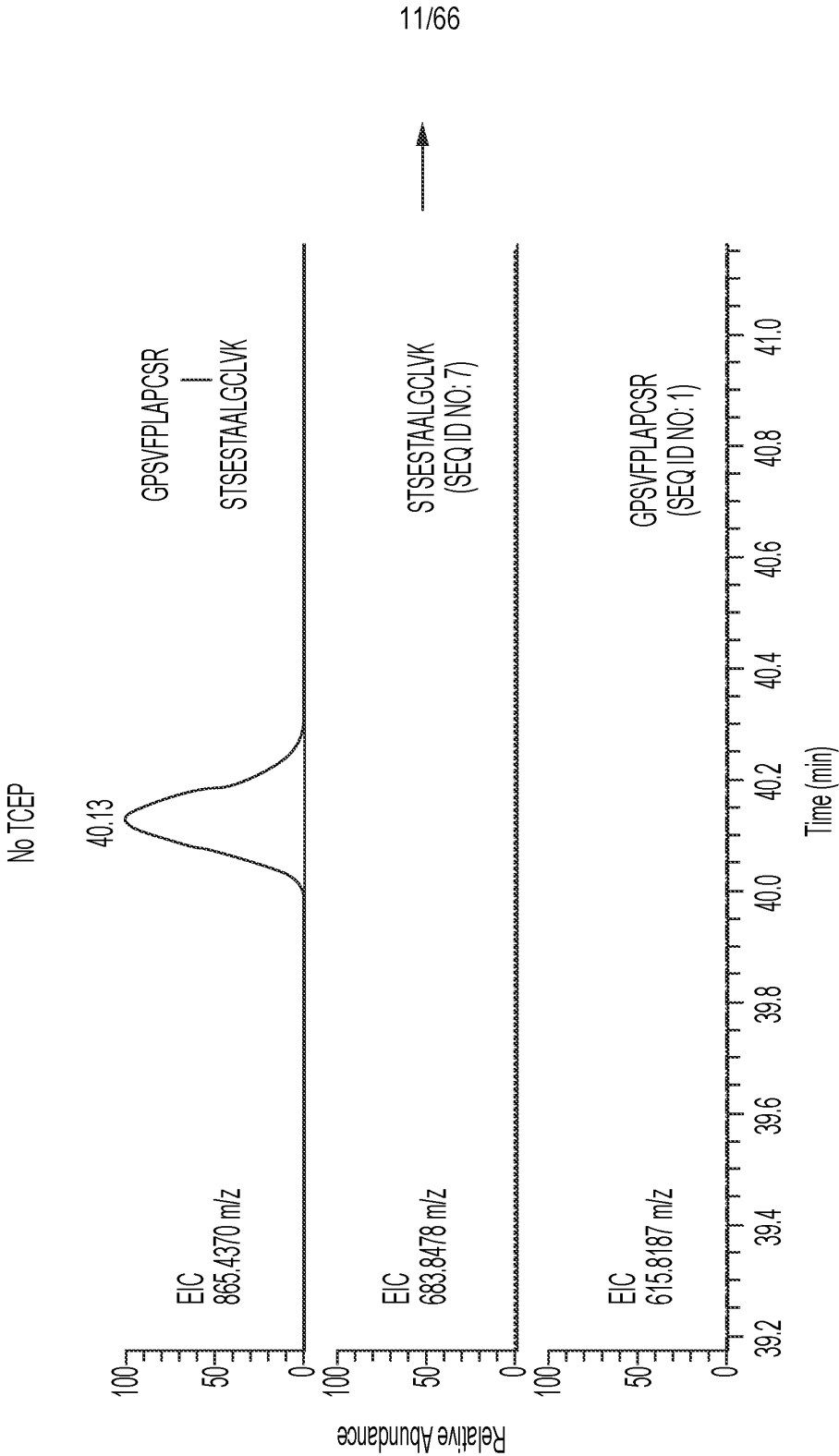


FIG. 7A

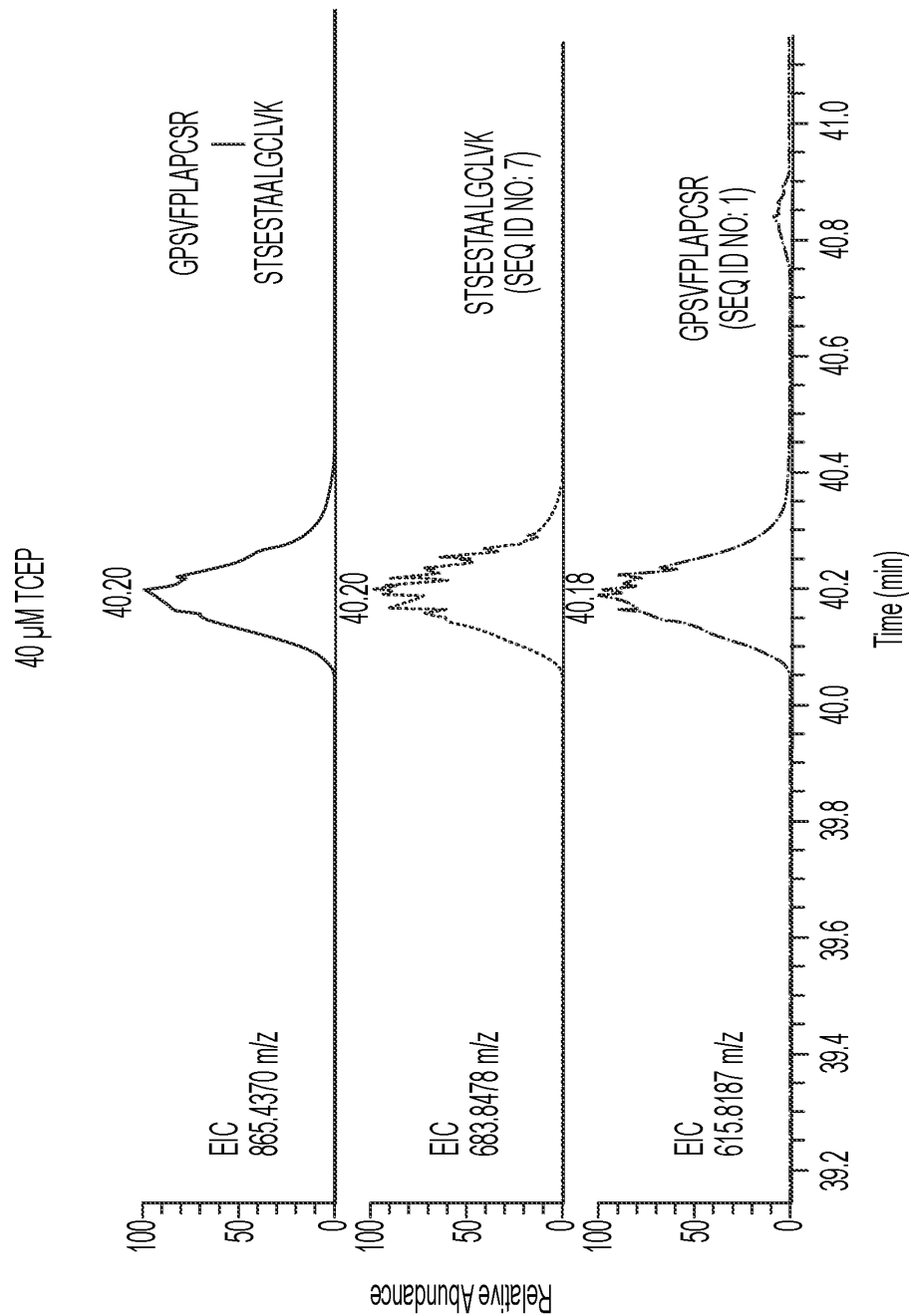


FIG. 7B

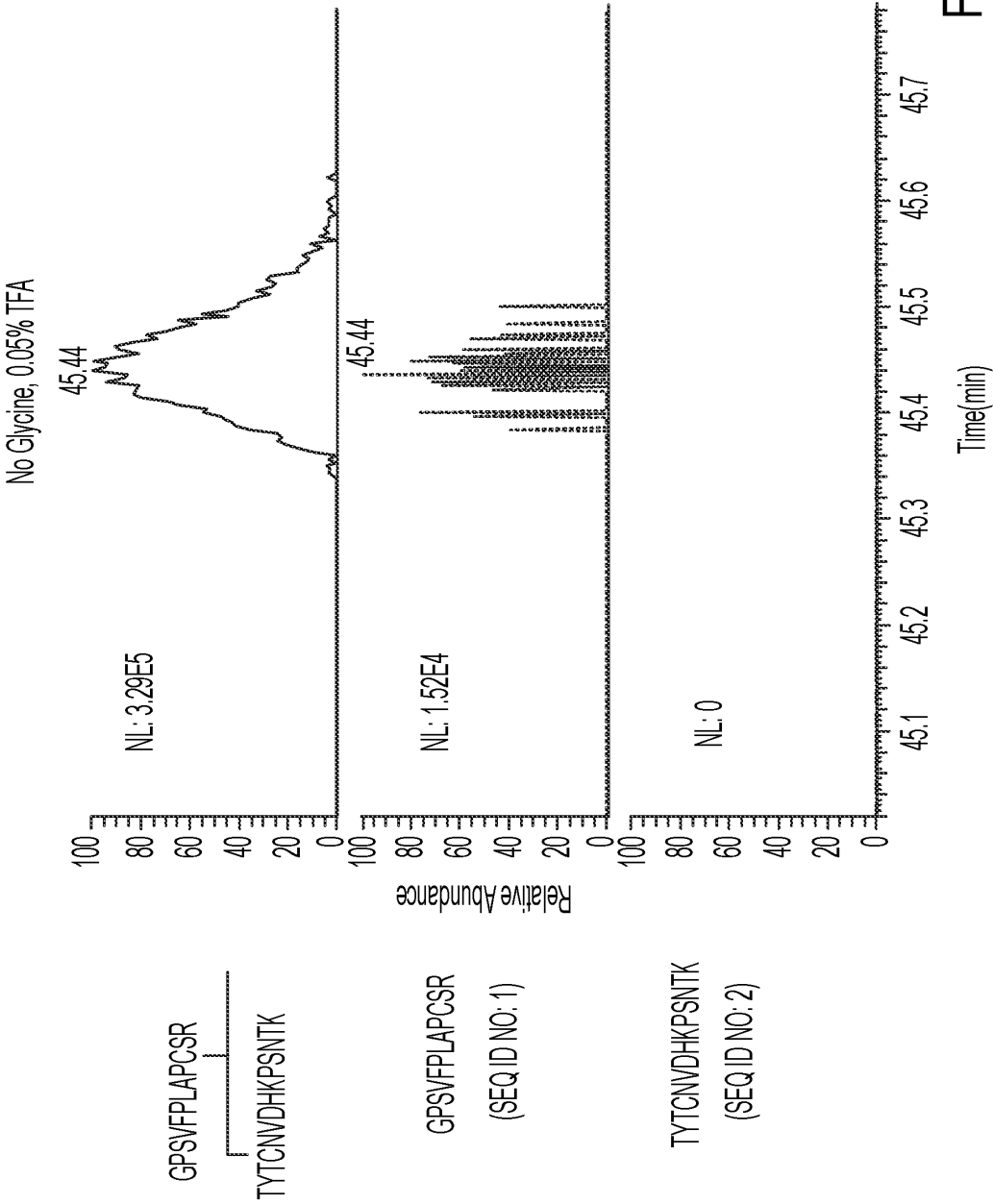
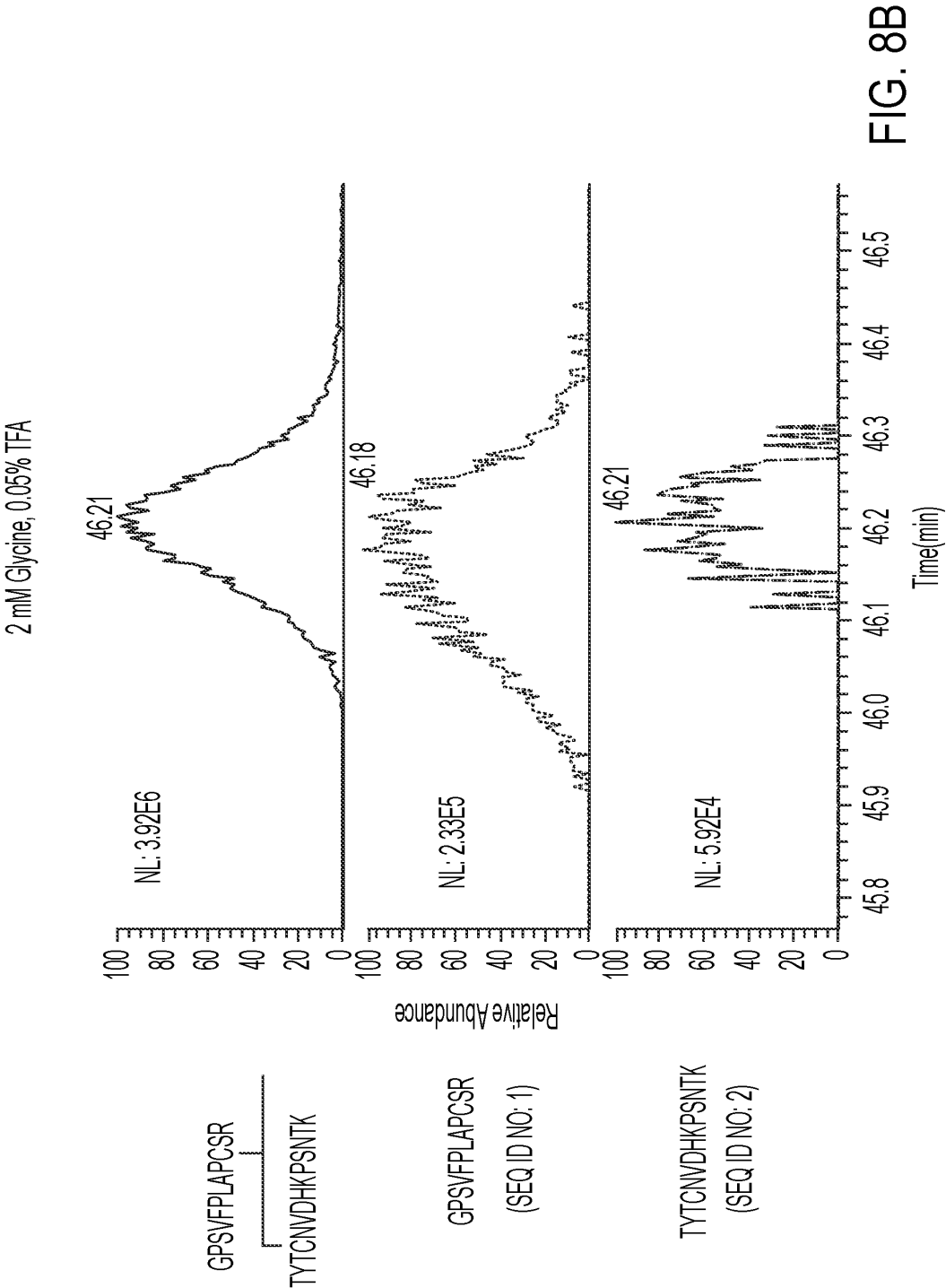
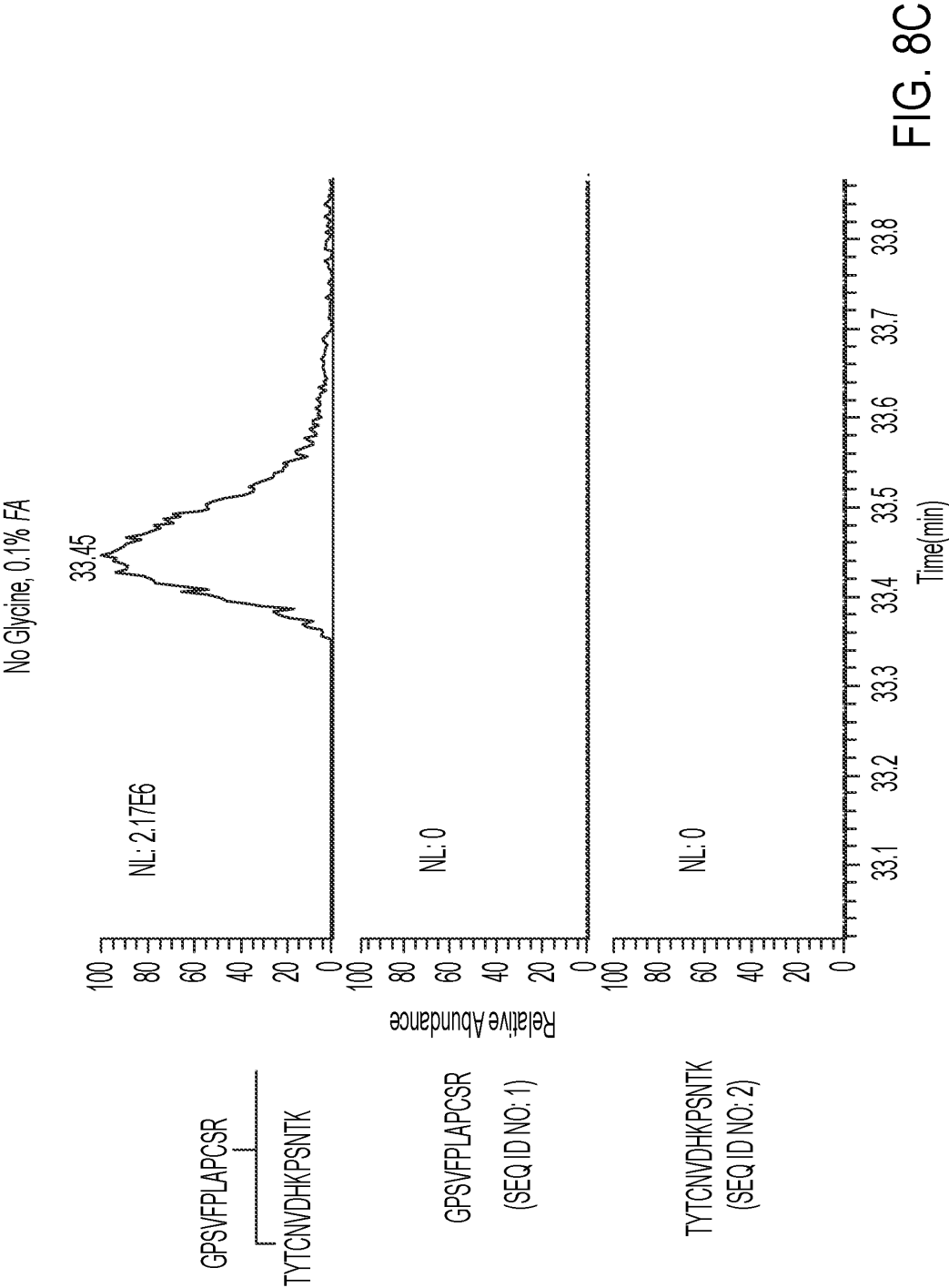


FIG. 8A





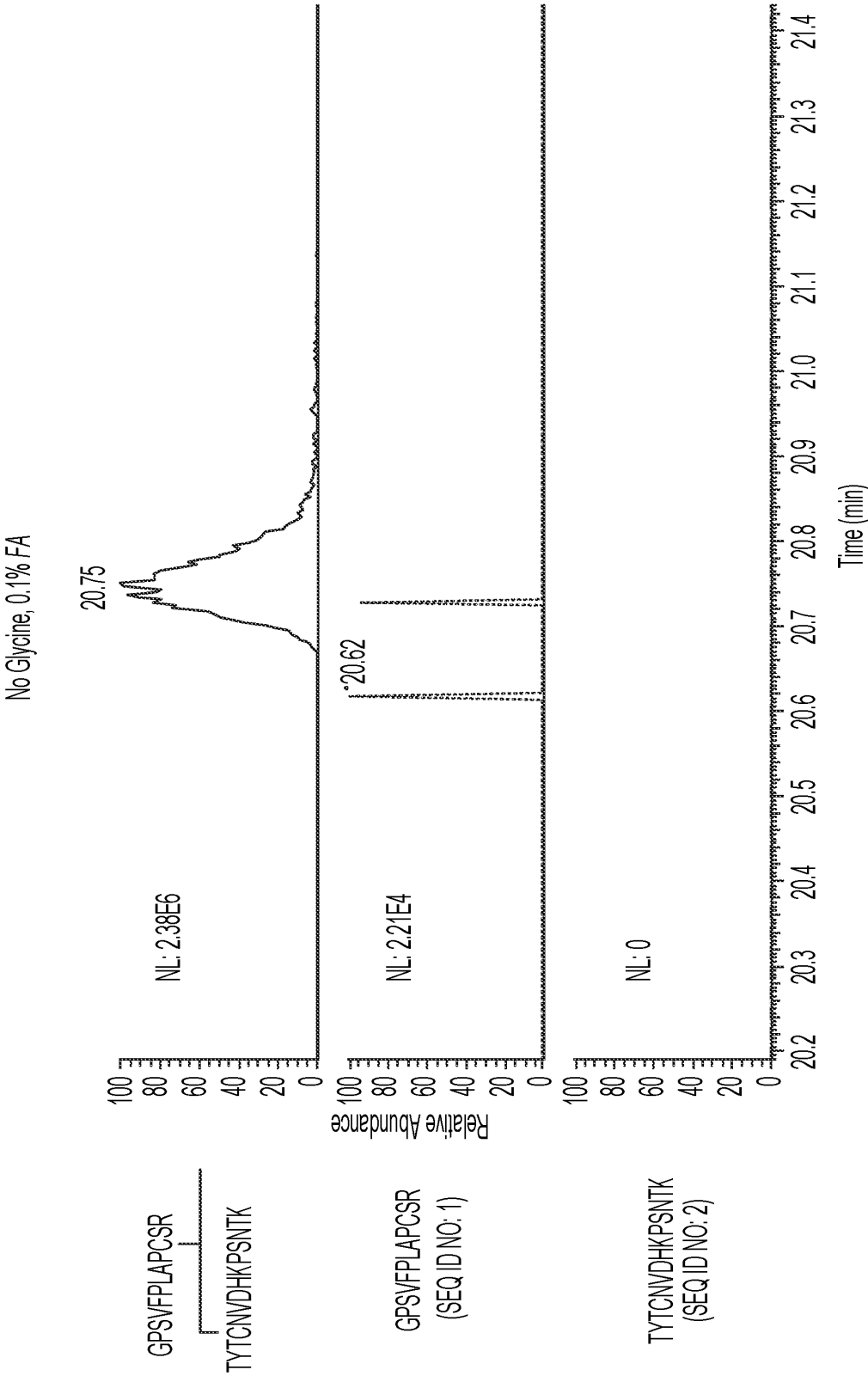


FIG. 8D

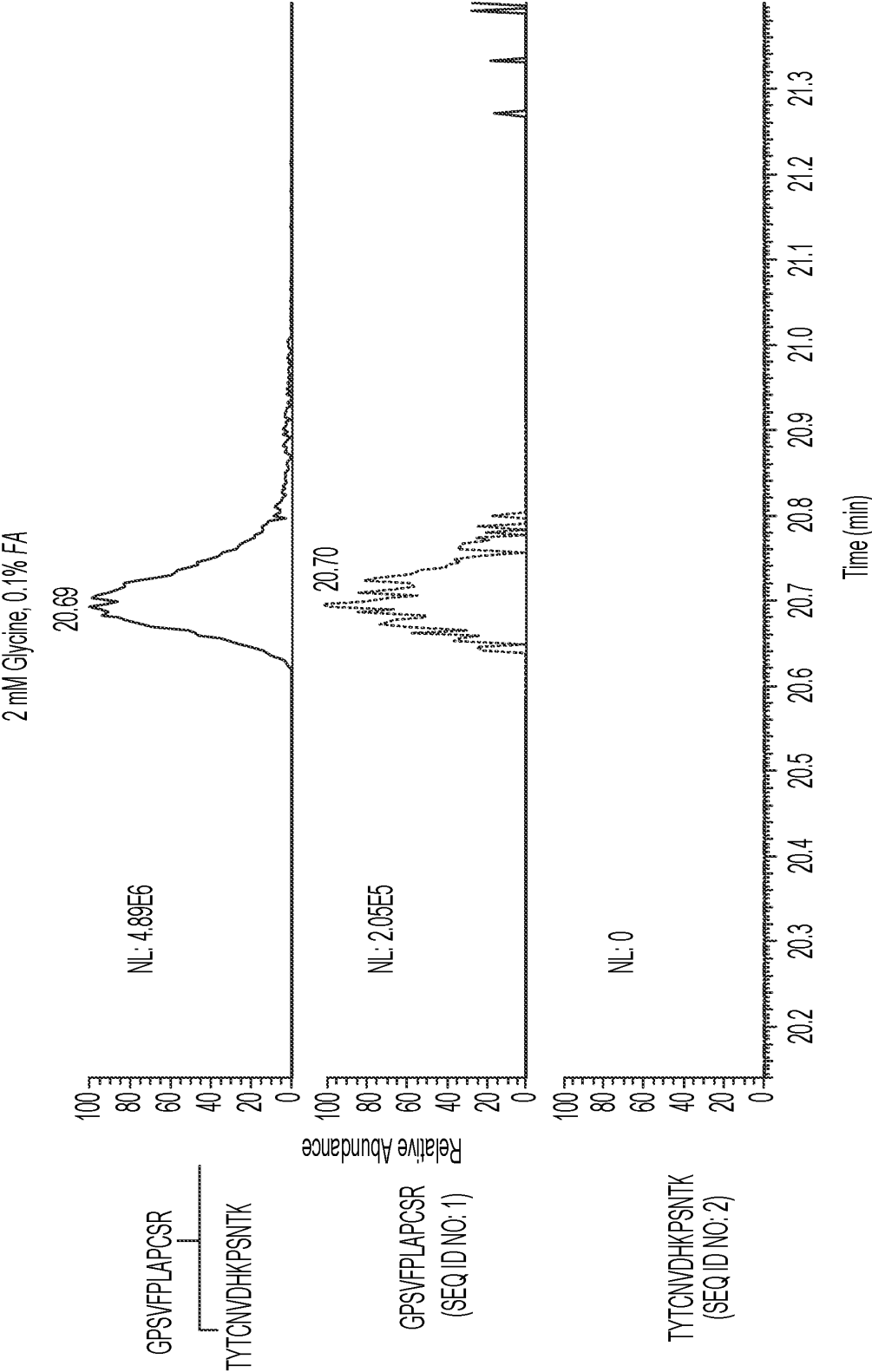


FIG. 8E

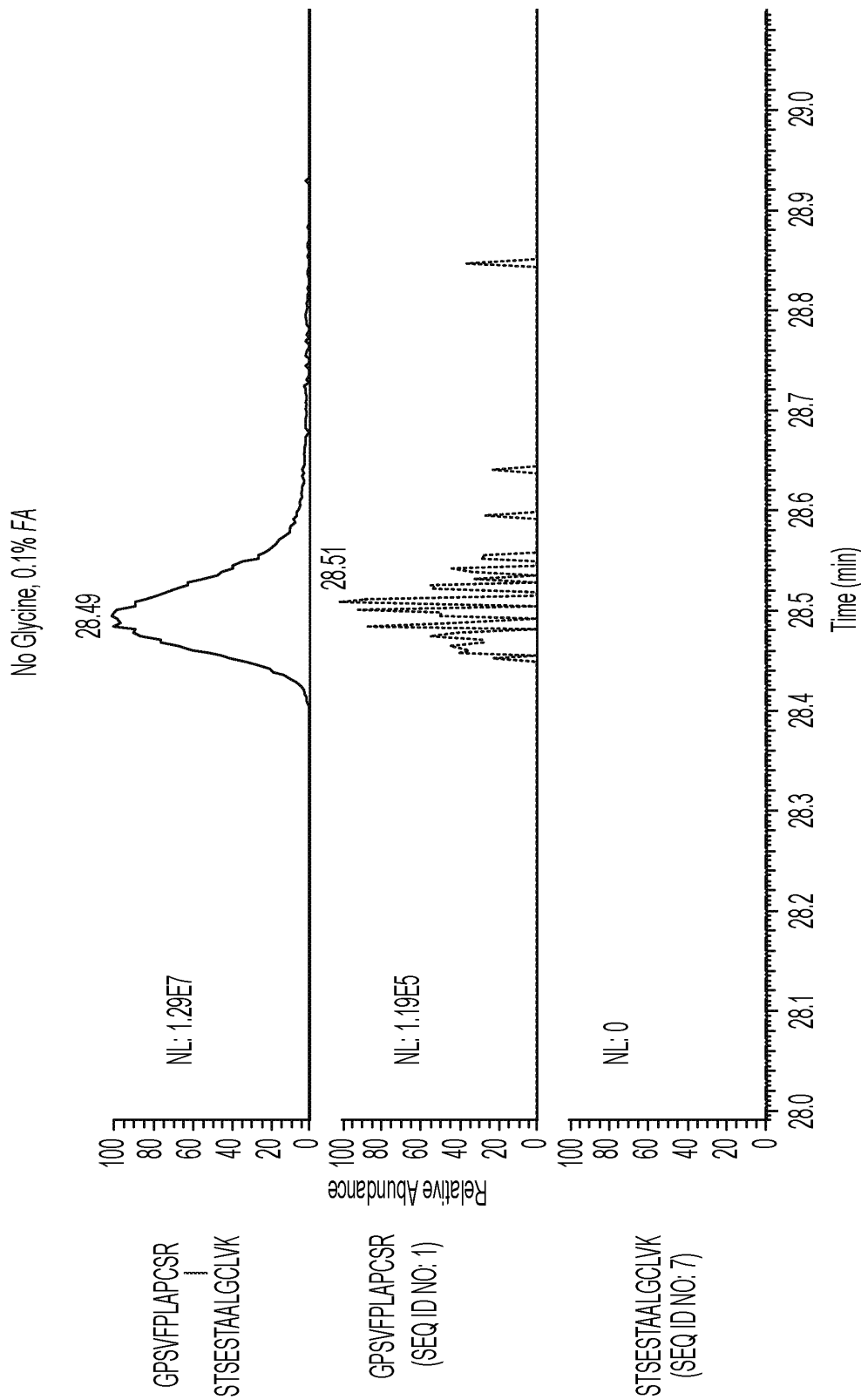


FIG. 8F

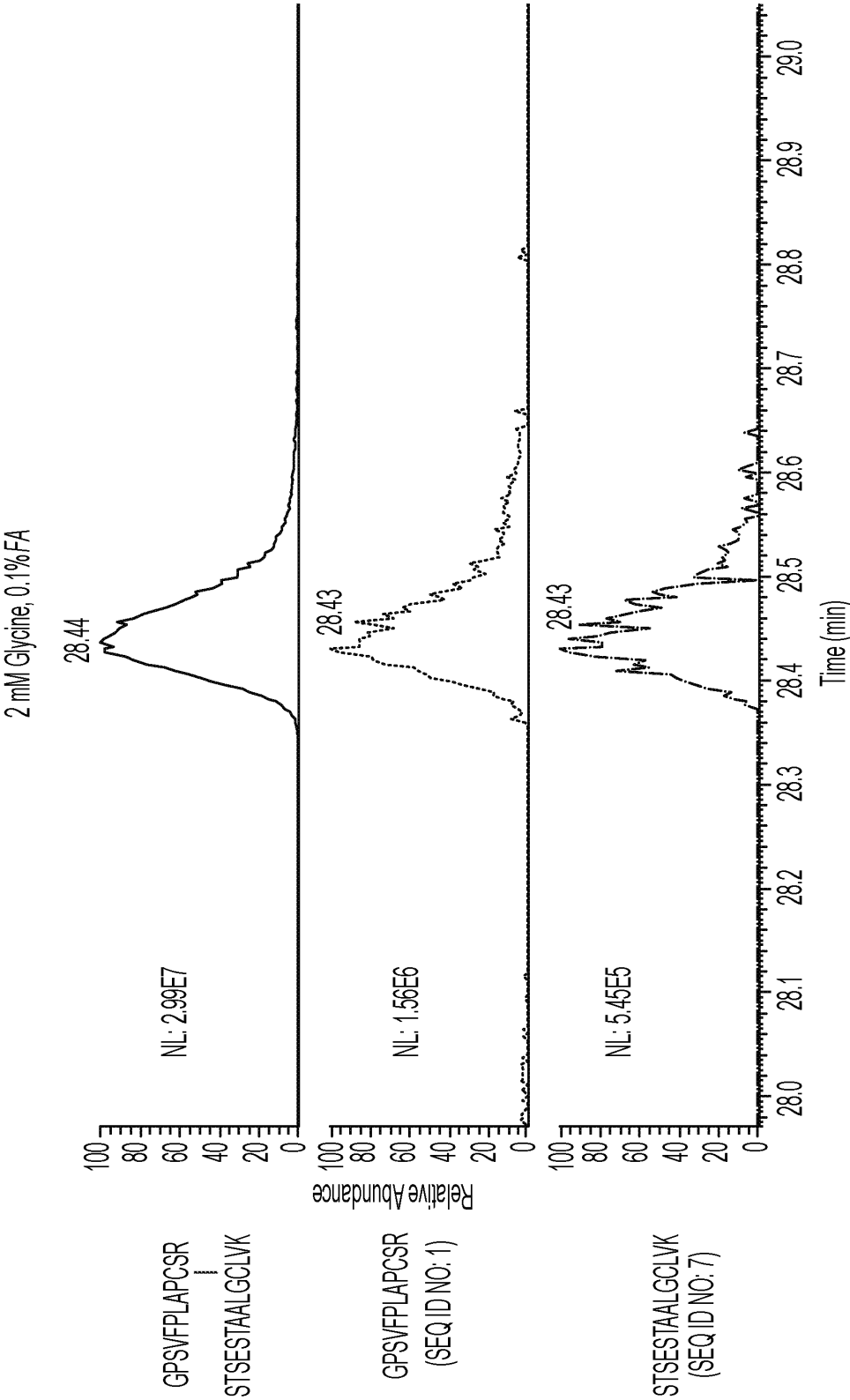


FIG. 8G

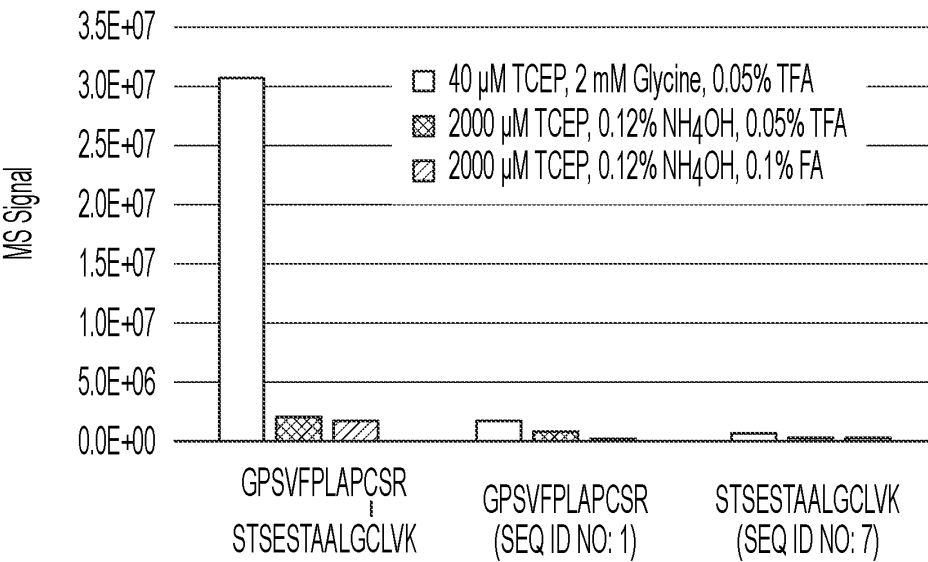


FIG. 9A

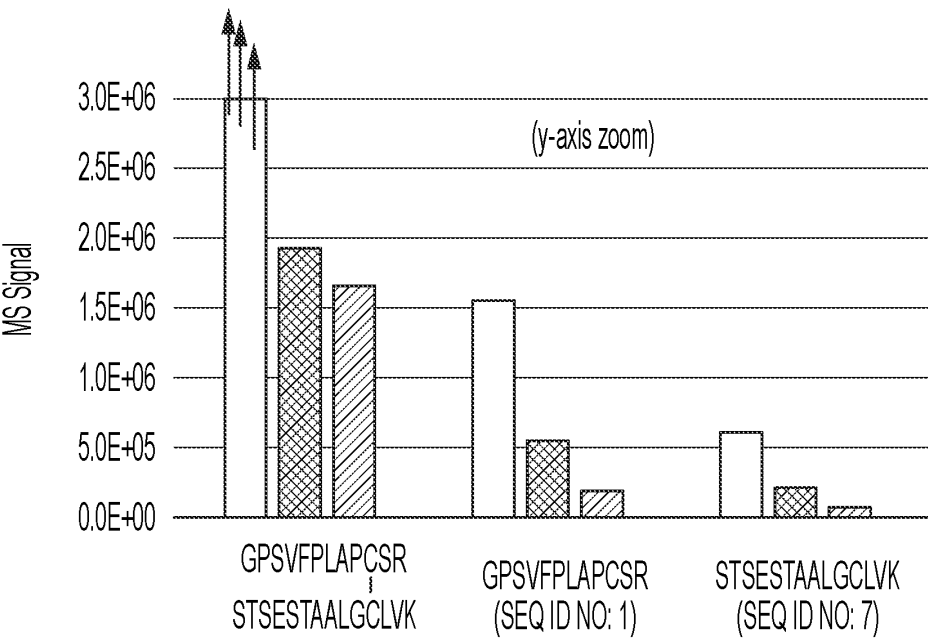


FIG. 9B

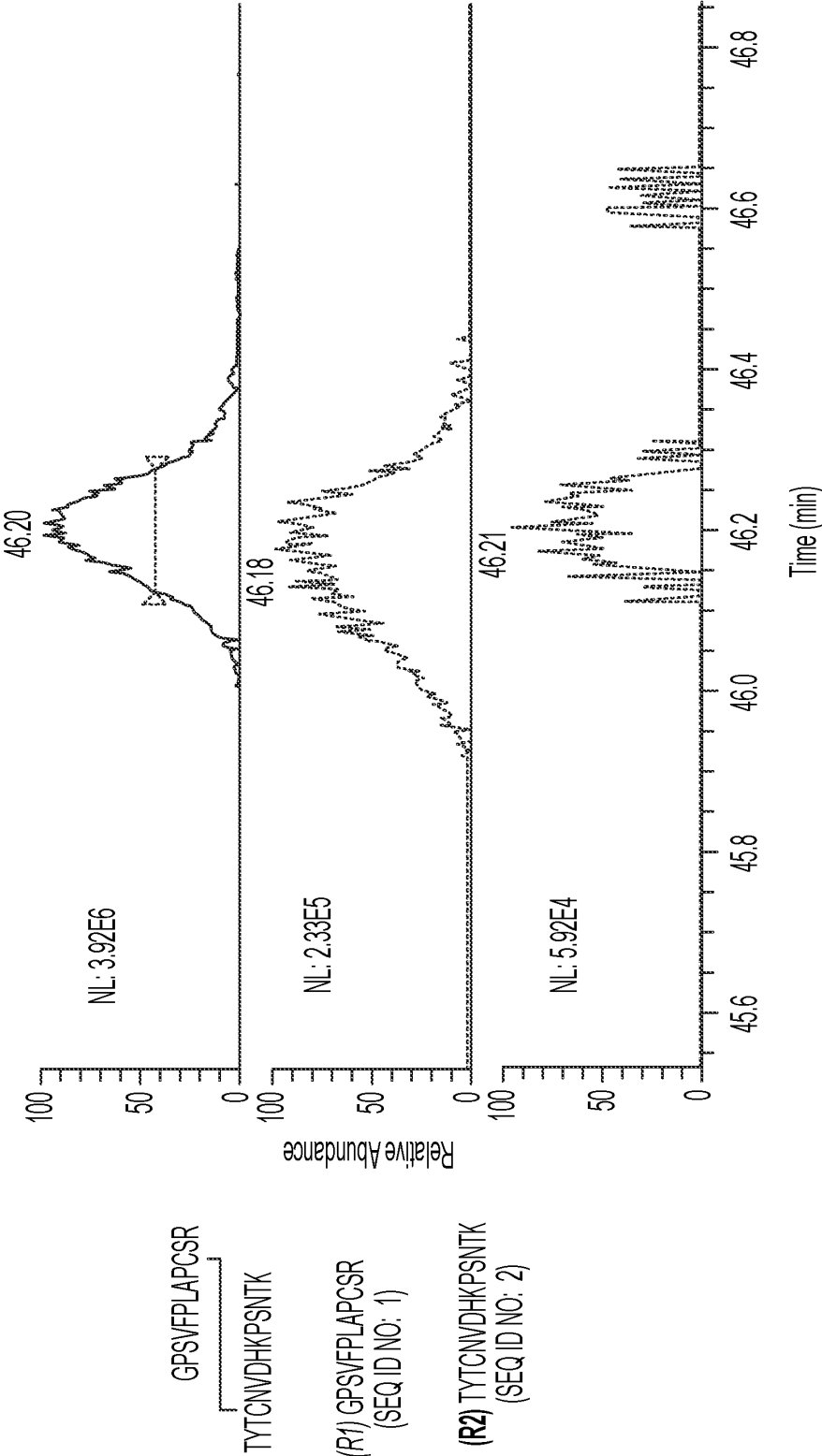


FIG. 10A

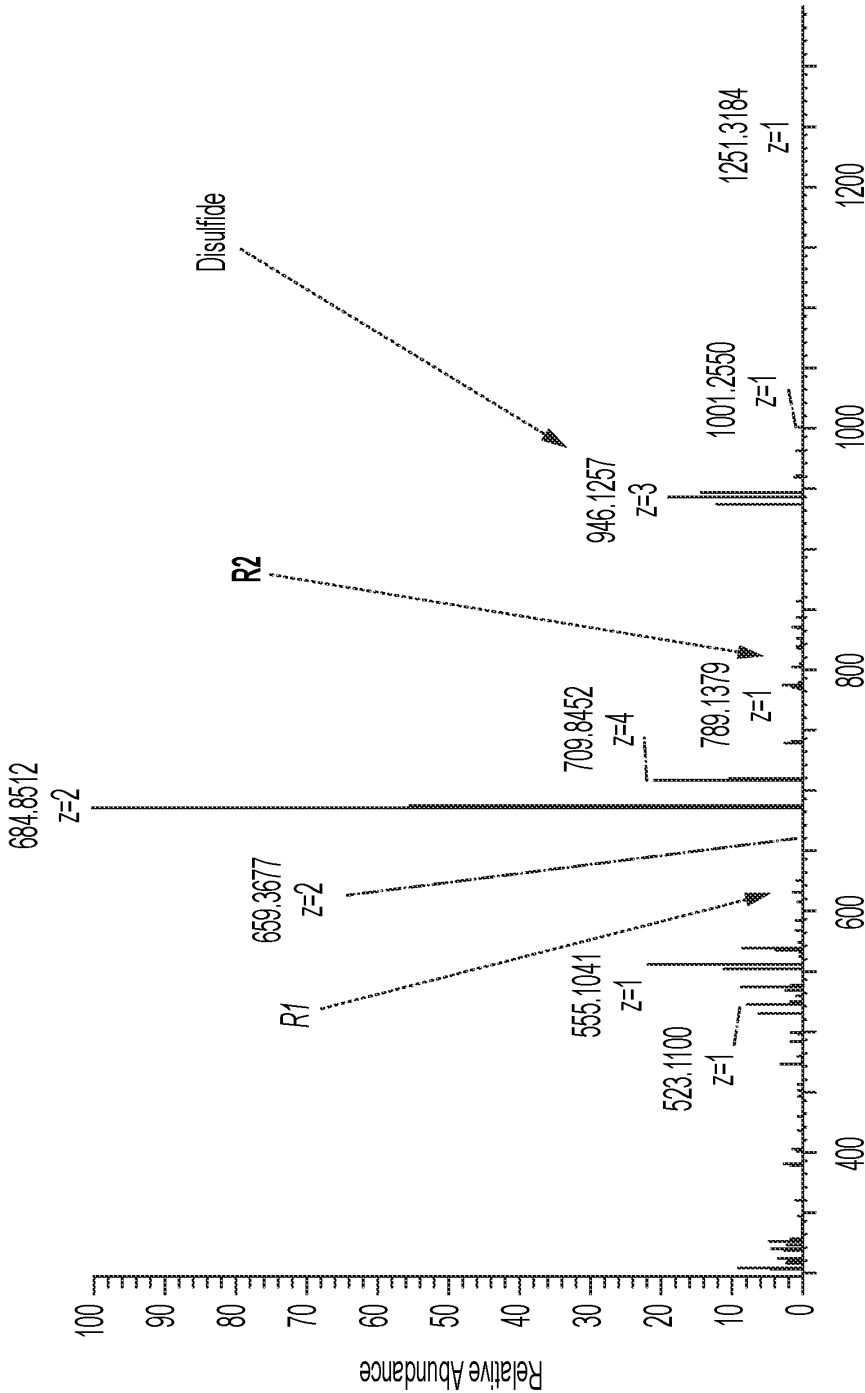


FIG. 10B

23/66

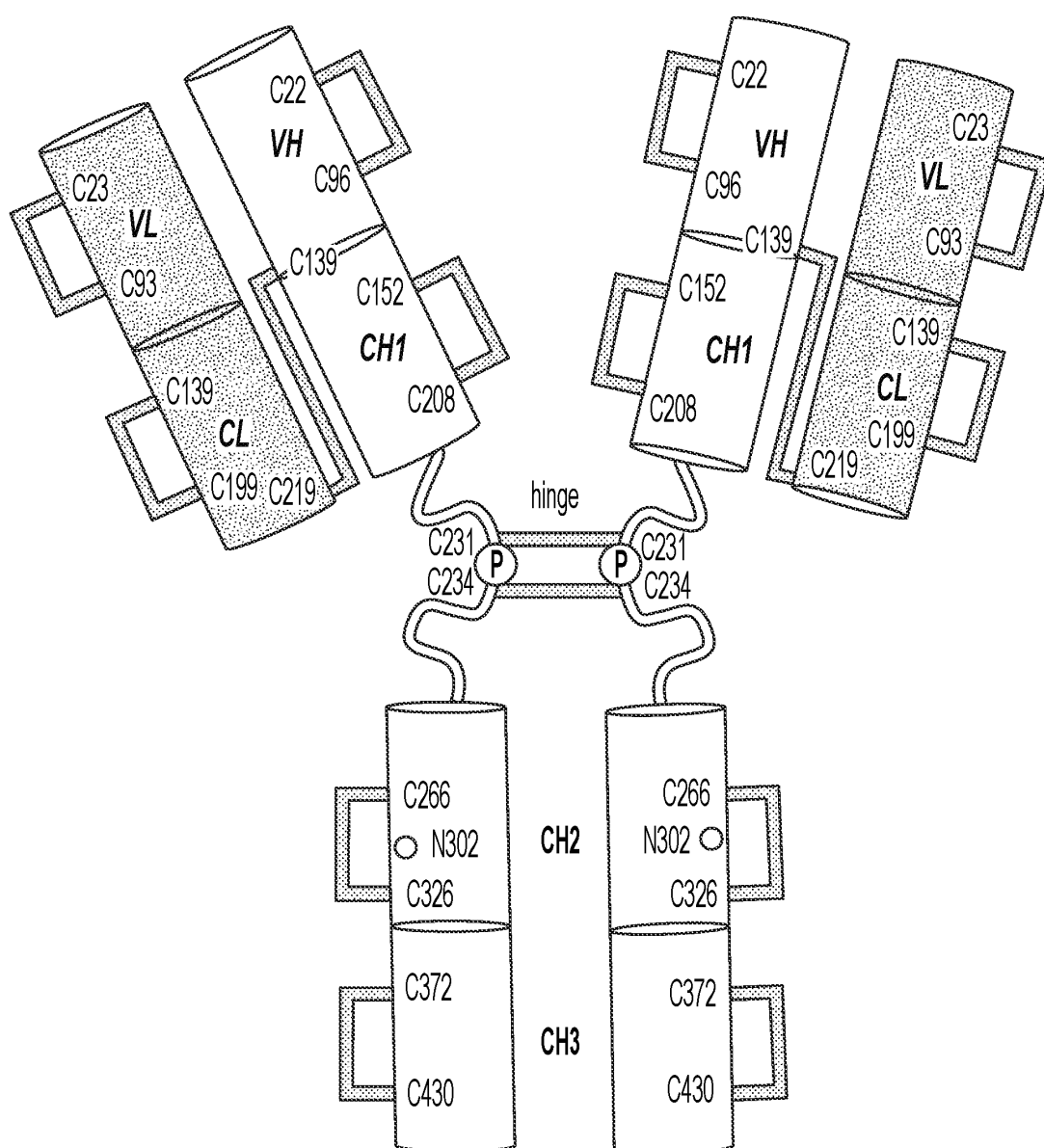


FIG.10C

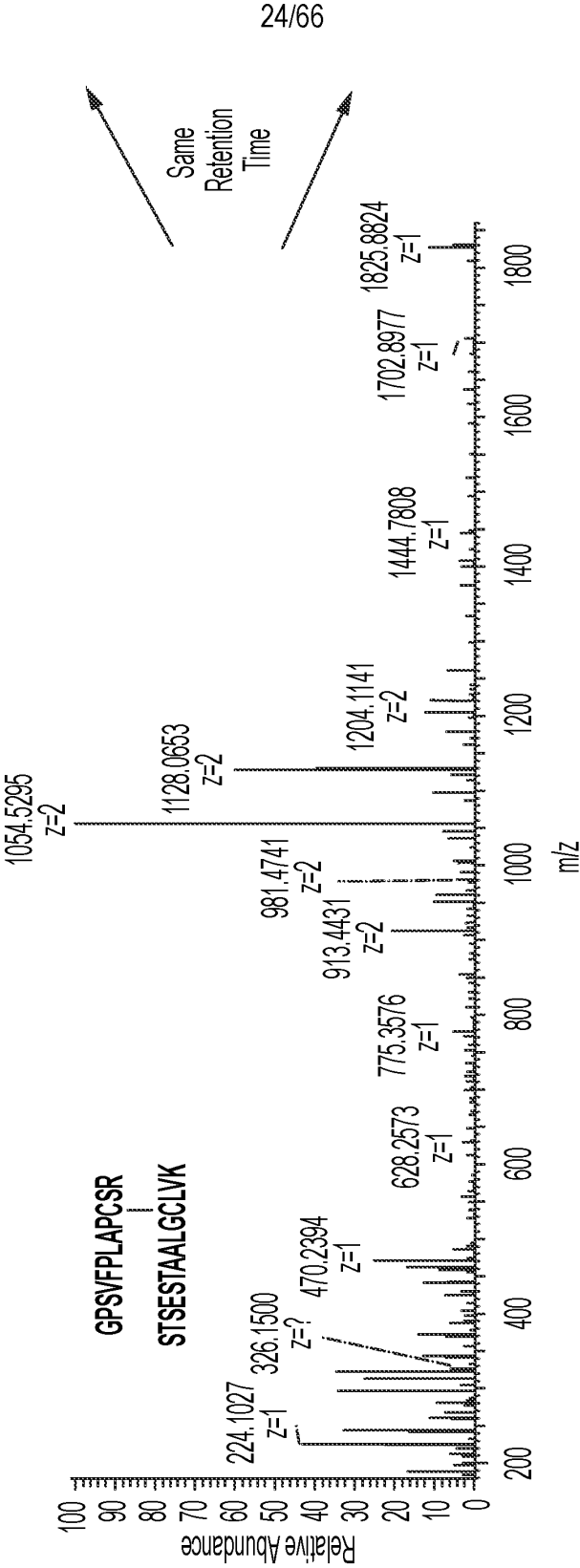


FIG. 11

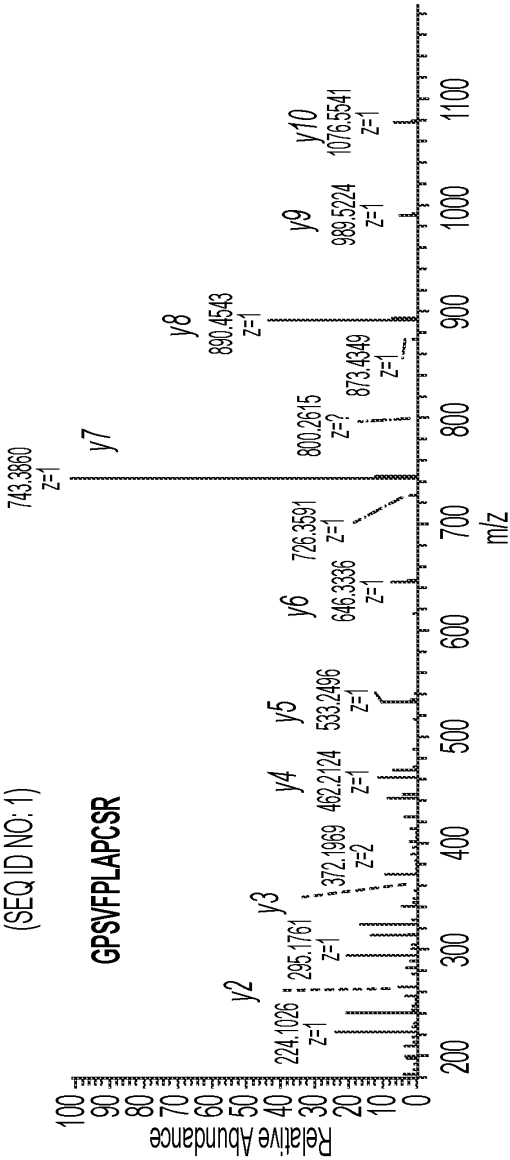
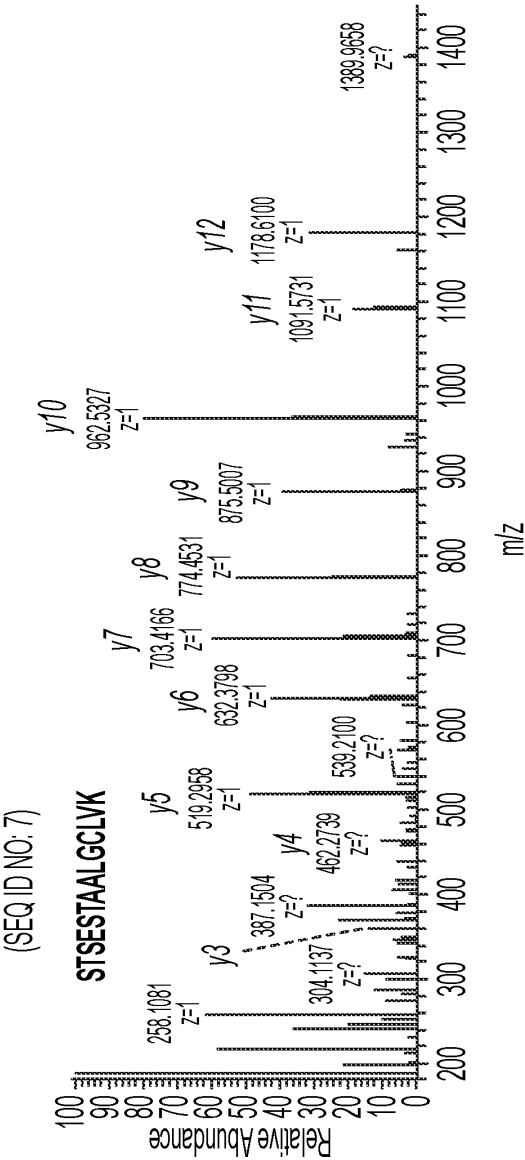


FIG. 11 CONT.

26/66

Cysteine Label	mAb2 Tryptic Peptide
C22H	LSCAGSGFTFR (SEQ ID NO: 8)
C96H	AEDTAVYYCAK (SEQ ID NO: 9)
C139H	GPSVFPLAPCSR (SEQ ID NO: 1)
C152H	STSESTAALGCLVK (SEQ ID NO: 7)
C208H	TYTCNVDPKPSNTK (SEQ ID NO: 2)
C266H	TPEVTCVVDVSQEDPEVQFNWYVDGVEVHNAK (SEQ ID NO: 10)
C326H	CK
C372H	NQVSLTCLVK (SEQ ID NO: 37)
C430H	WQEGNVFSCSVMHEALHNHYTQK (SEQ ID NO: 11)
C23L	DIVMTQSPLSLPVTPGEPASISCR (SEQ ID NO: 12)
C93L	VEAEDVGFYYCMQALQTPYTFGQGTK (SEQ ID NO: 13)
C139L	SGTASVCLLNIFYPR (SEQ ID NO: 14)
C199L	VYACEVTHQGLSSPVTK (SEQ ID NO: 15)
C219L	SFNRGEC (SEQ ID NO: 16)

FIG. 12

27/66

Peptide 1	Peptide 2	Peptide 1	Peptide 2
C152H	C152H	C208H	C139L
C152H	C139H	C139H	C139H
C152H	C219L	C139H	C372H
C152H	C372H	C139H	C430H
C152H	C430H	C139H	C96H
C152H	C96H	C139H	C199L
C152H	C199L	C139H	C266H
C152H	C266H	C139H	C23L
C152H	C23L	C139H	C93L
C152H	C93L	C139H	C22H
C152H	C22H	C139H	C326H
C152H	C326H	C139H	C139L
C152H	C139L	C219L	C219L
C208H	C208H	C219L	C372H
C208H	C139H	C219L	C430H
C208H	C219L	C219L	C96H
C208H	C372H	C219L	C199L
C208H	C430H	C219L	C266H
C208H	C96H	C219L	C23L
C208H	C199L	C219L	C93L
C208H	C266H	C219L	C22H
C208H	C23L	C219L	C326H
C208H	C93L	C219L	C139L
C208H	C22H	C372H	C372H
C208H	C326H	C372H	C96H

FIG. 13

28/66

Peptide 1	Peptide 2	Peptide 1	Peptide 2	Confidence Level
C372H	C199L	C199L	C266H	
C372H	C266H	C199L	C23L	
C372H	C23L	C199L	C93L	
C372H	C93L	C199L	C22H	
C372H	C22H	C199L	C326H	
C372H	C326H	C266H	C266H	Not Detected Low Medium High Ultra-High
C372H	C139L	C266H	C23L	
C430H	C430H	C266H	C93L	
C430H	C96H	C266H	C22H	
C430H	C199L	C266H	C139L	
C430H	C266H	C23L	C23L	
C430H	C23L	C23L	C22H	Low = 11.3% Medium = 17.0% High(+) = 71.6%
C430H	C93L	C23L	C326H	
C430H	C22H	C23L	C139L	
C430H	C326H	C93L	C93L	
C430H	C139L	C93L	C22H	
C96H	C96H	C93L	C326H	
C96H	C199L	C93L	C139L	
C96H	C266H	C22H	C22H	
C96H	C23L	C22H	C326H	
C96H	C93L	C22H	C139L	
C96H	C326H	C326H	C326H	
C96H	C139L	C326H	C139L	
C199L	C199L	C139L	C139L	

FIG. 13 CONT.

29/66

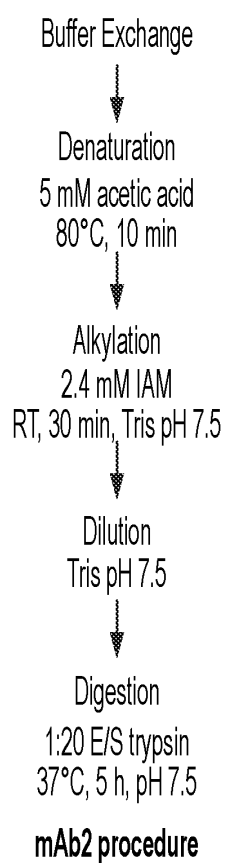


FIG. 14A

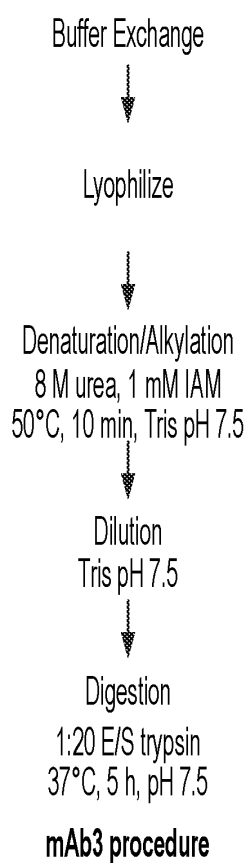


FIG. 14B

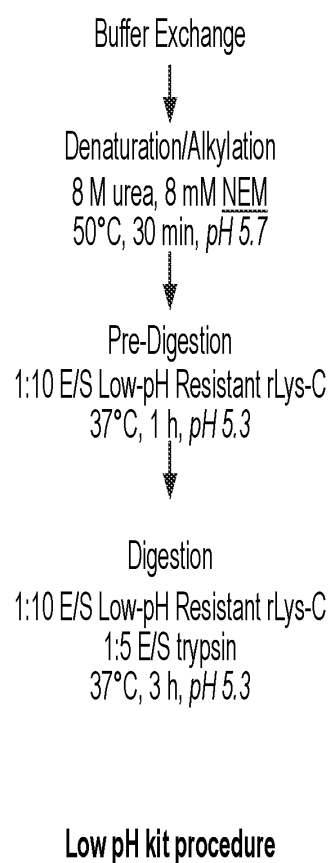


FIG. 14C

30/66

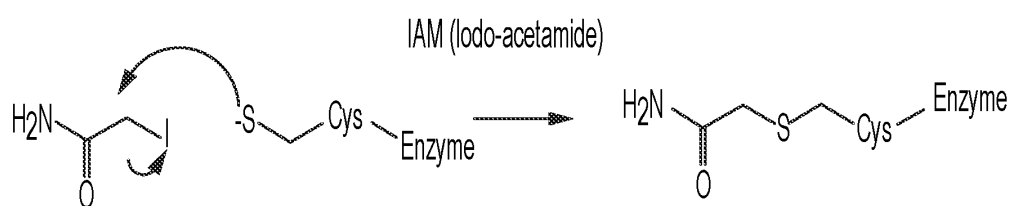


FIG. 15A

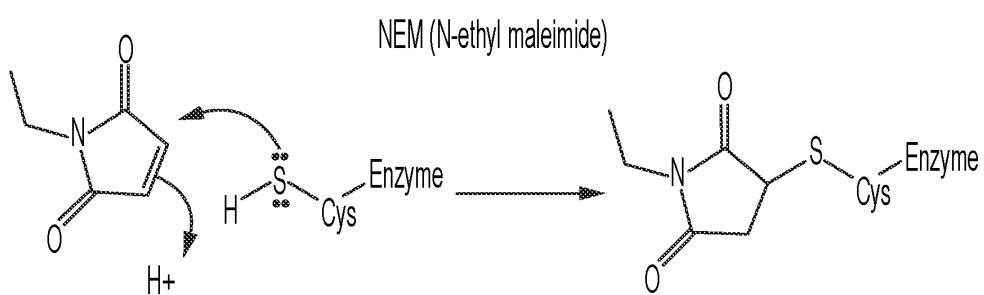


FIG. 15B

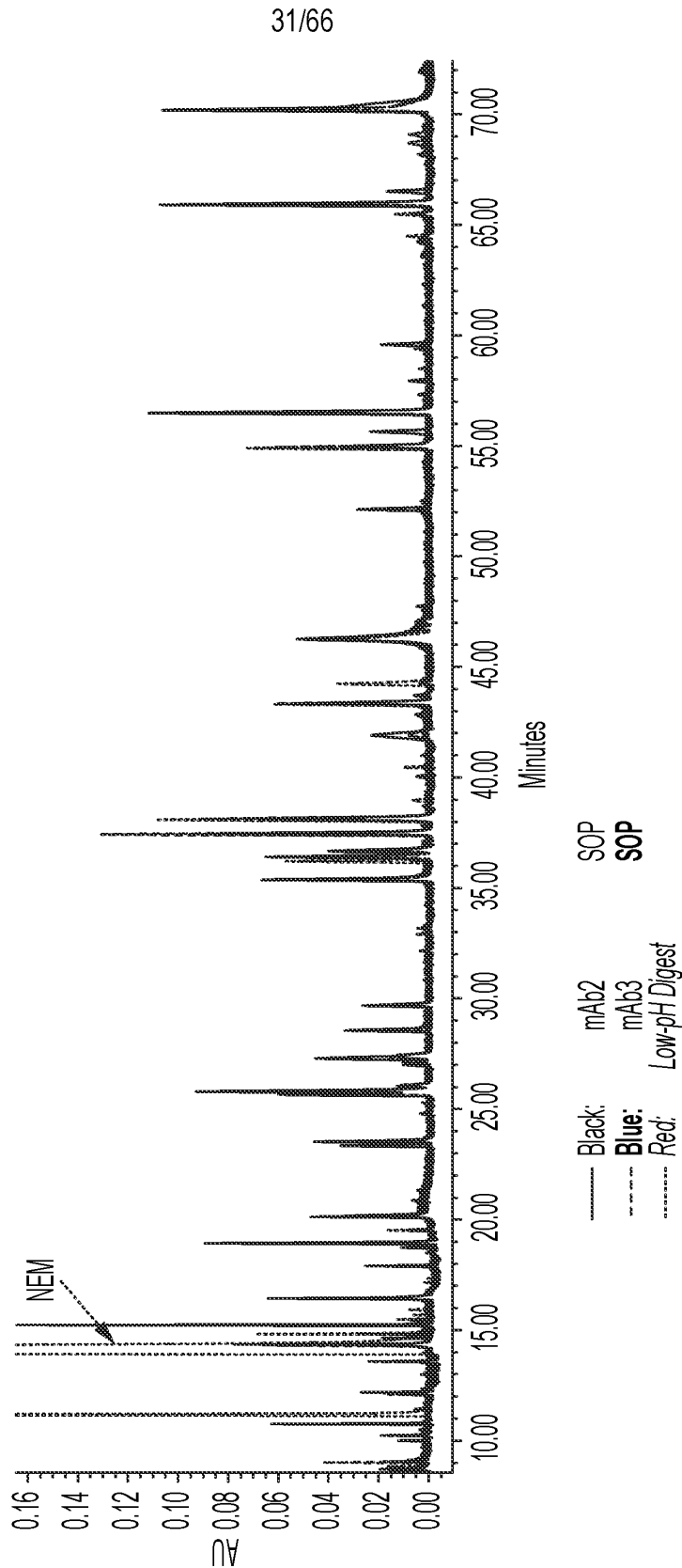


FIG. 16

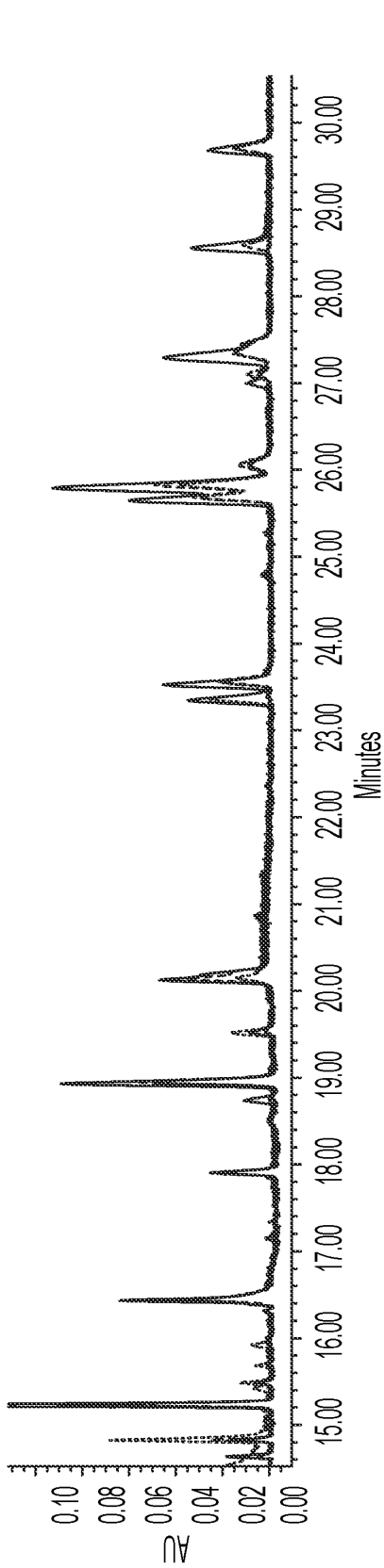


FIG. 17A

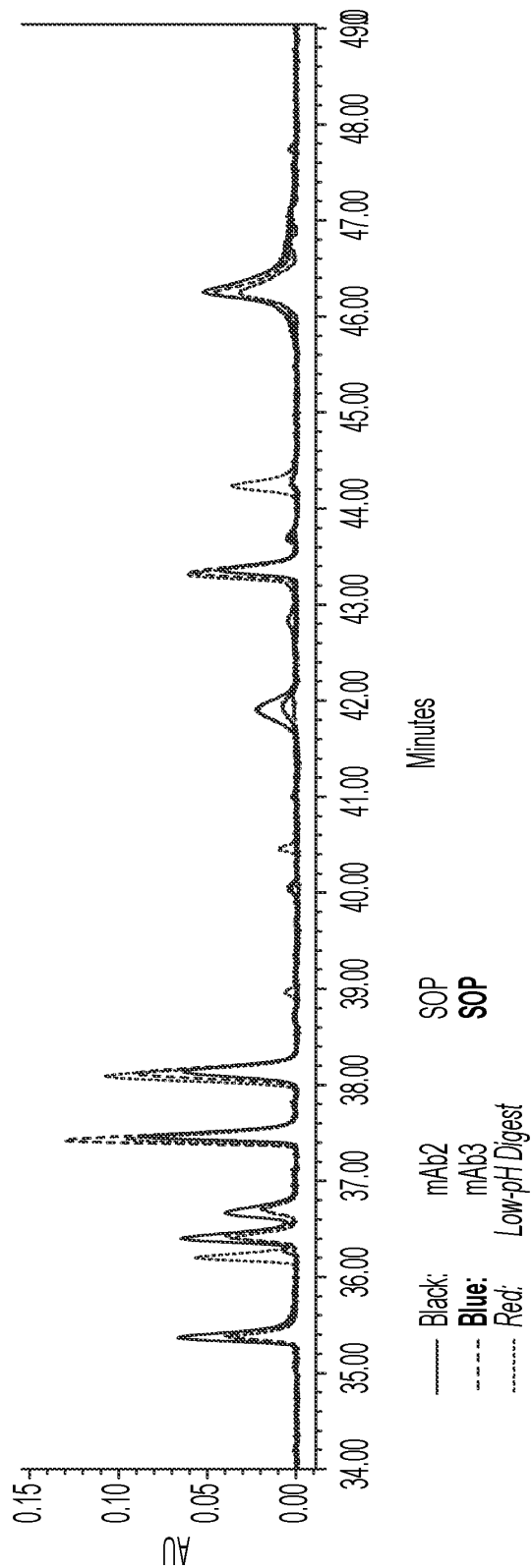


FIG. 17B

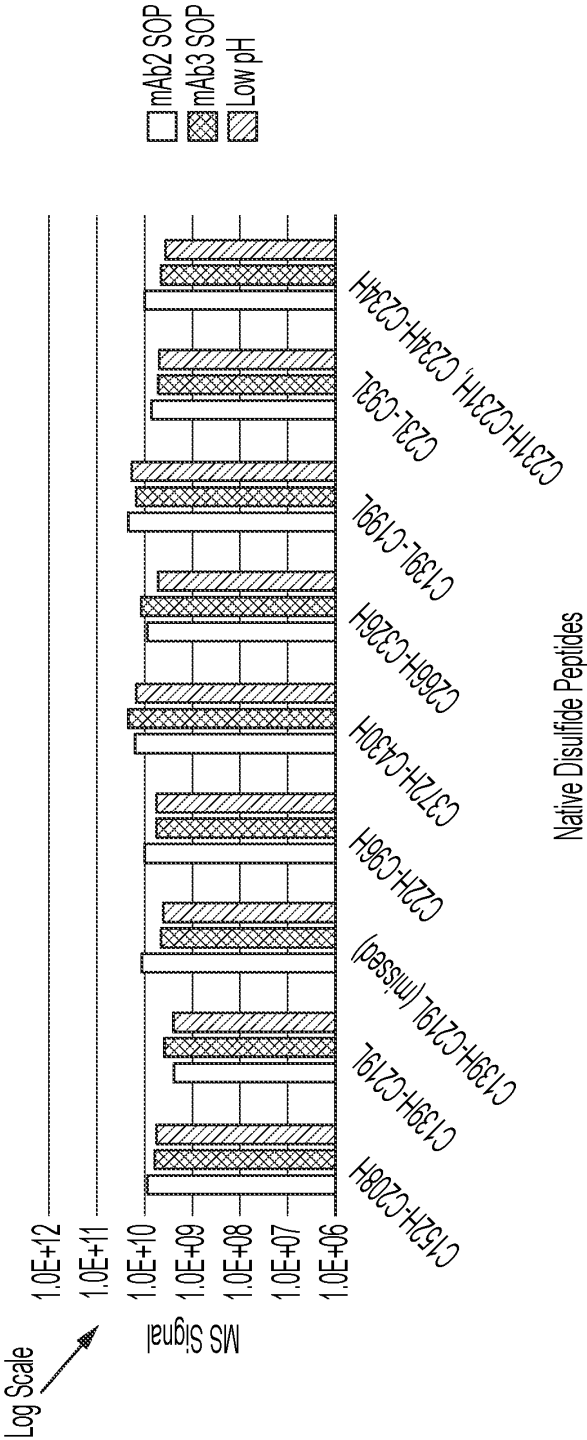


FIG. 18

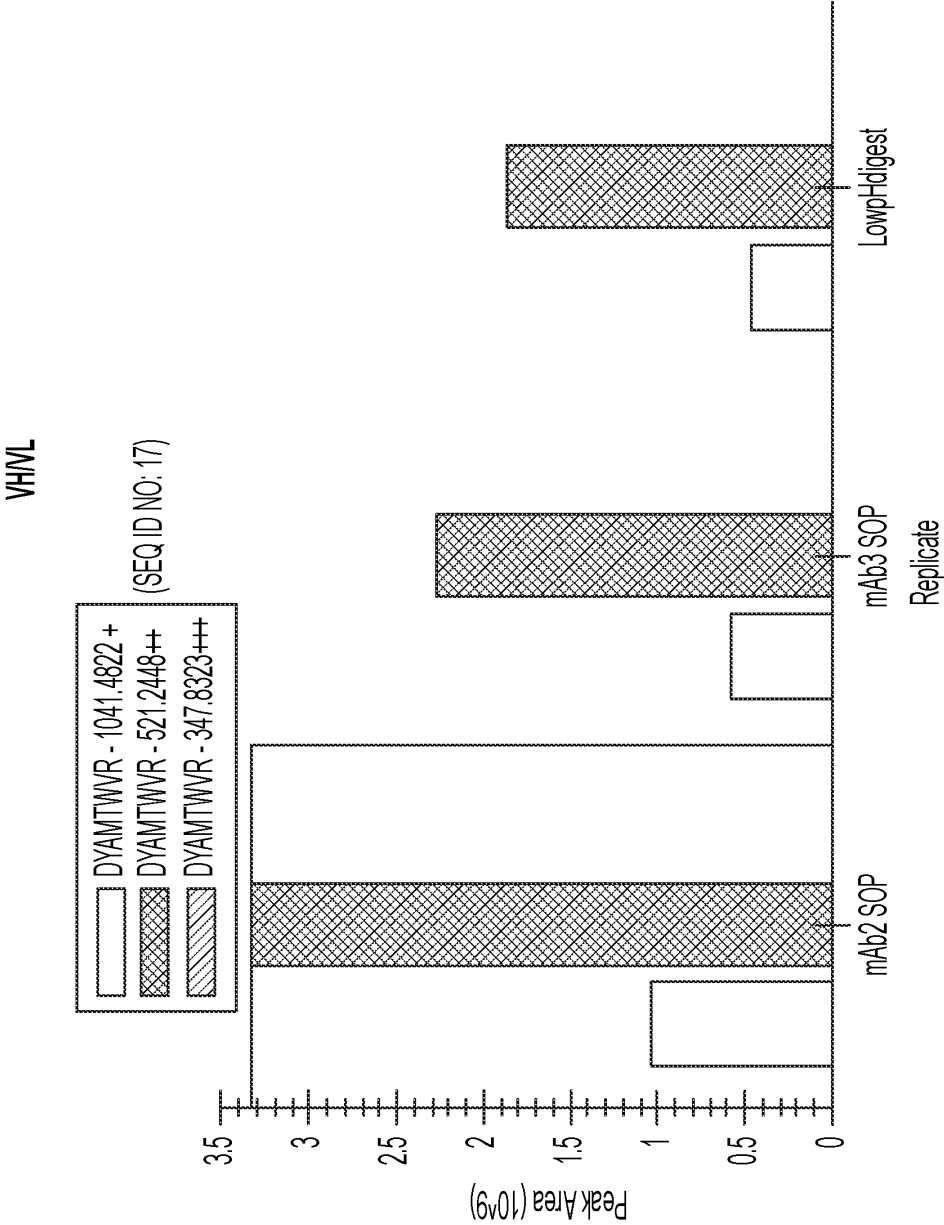


FIG. 19A

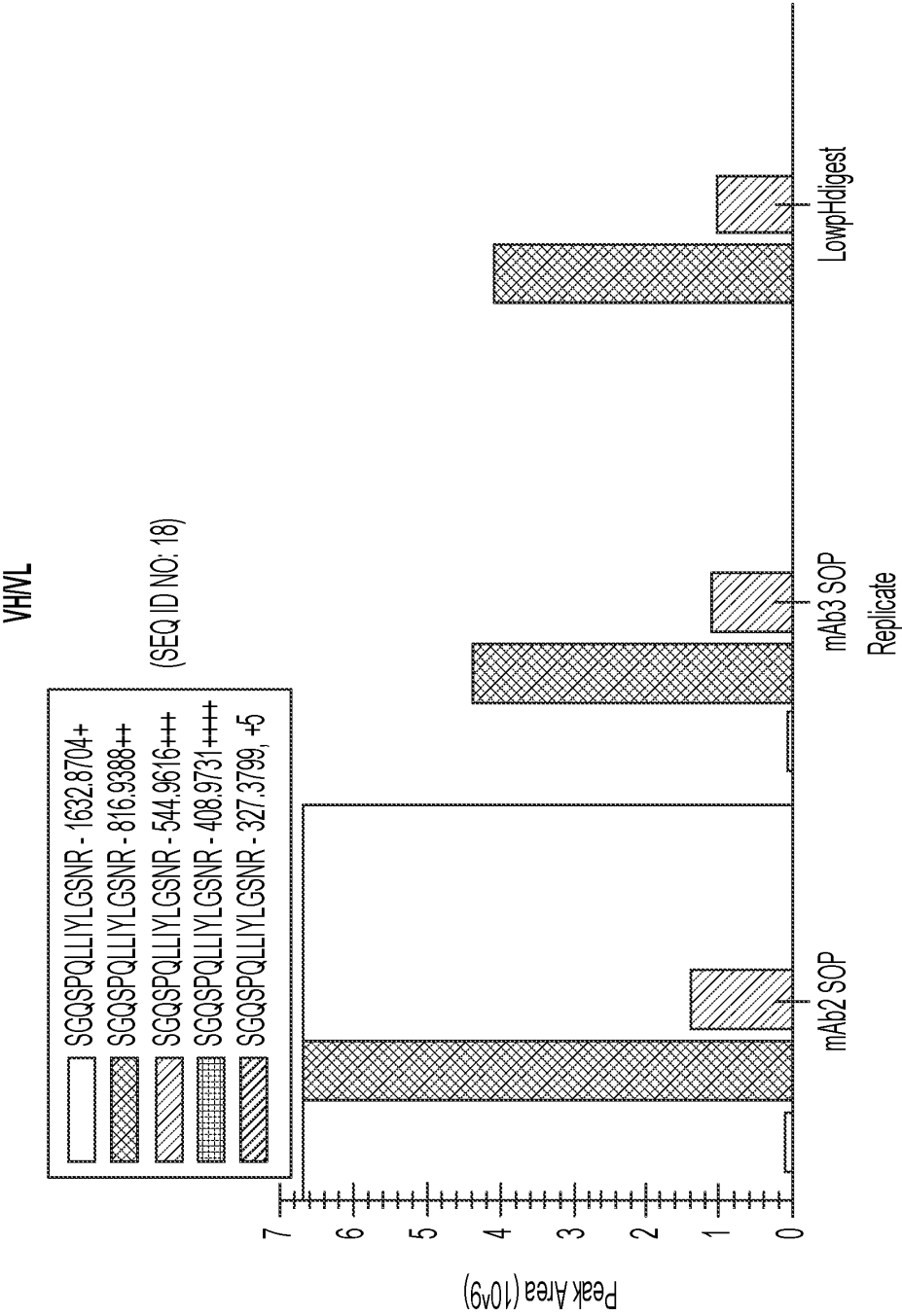


FIG. 19A CONT.

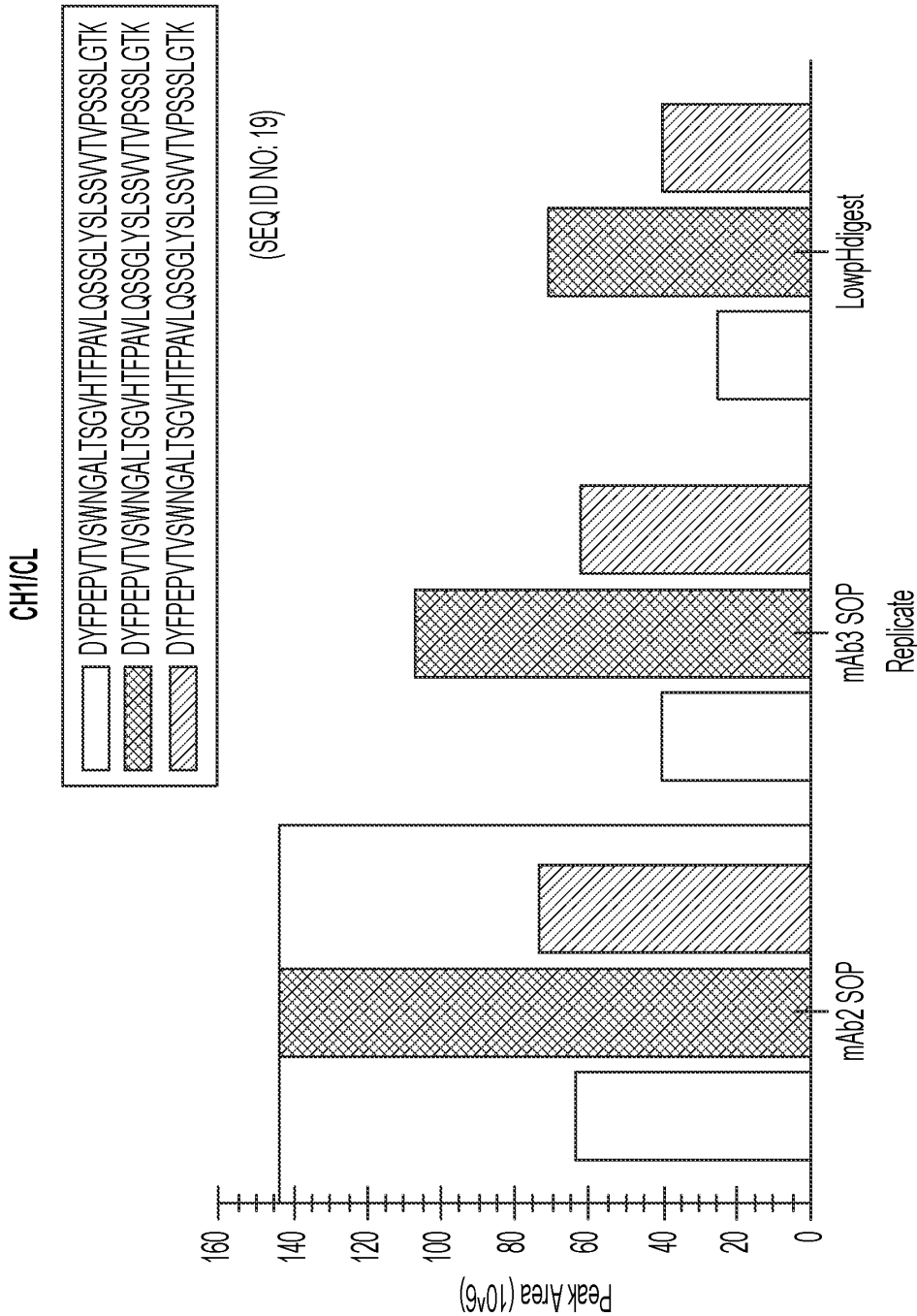


FIG. 19B

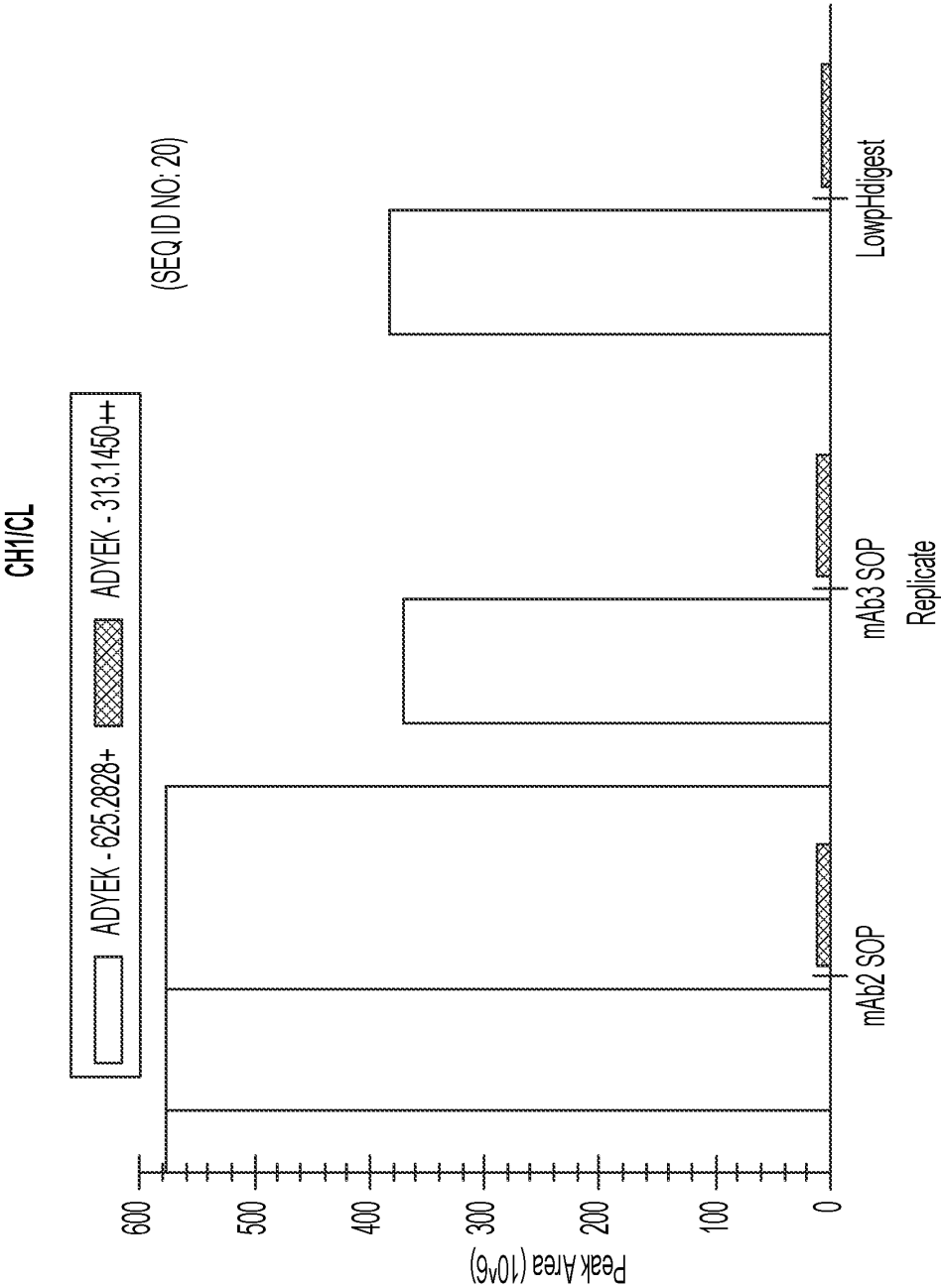


FIG. 19B CONT.

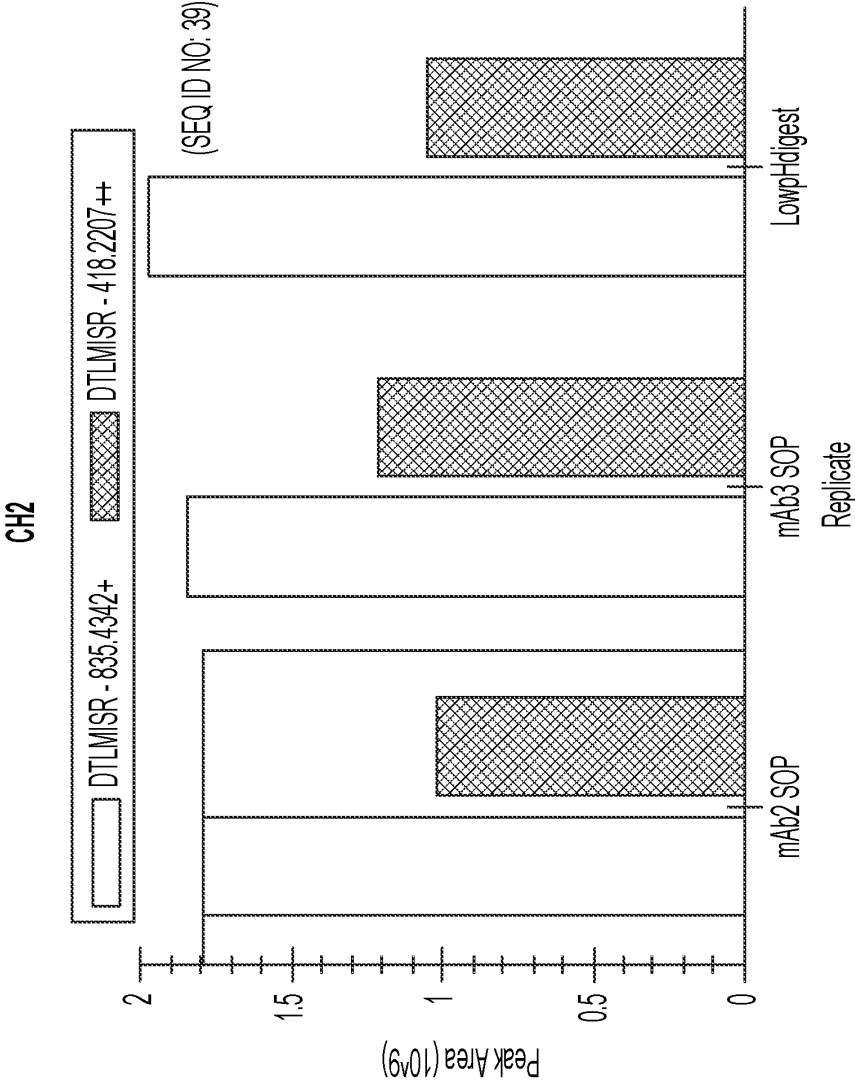


FIG. 19C

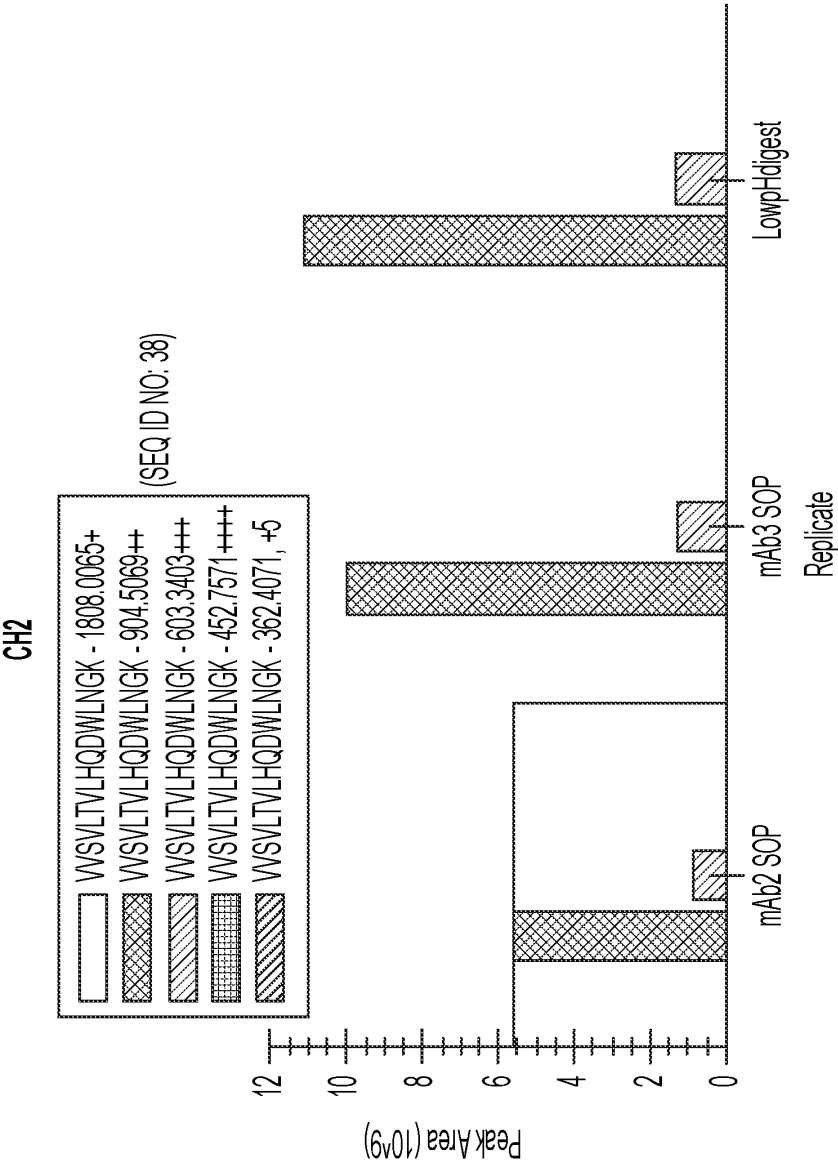


FIG. 19C CONT.

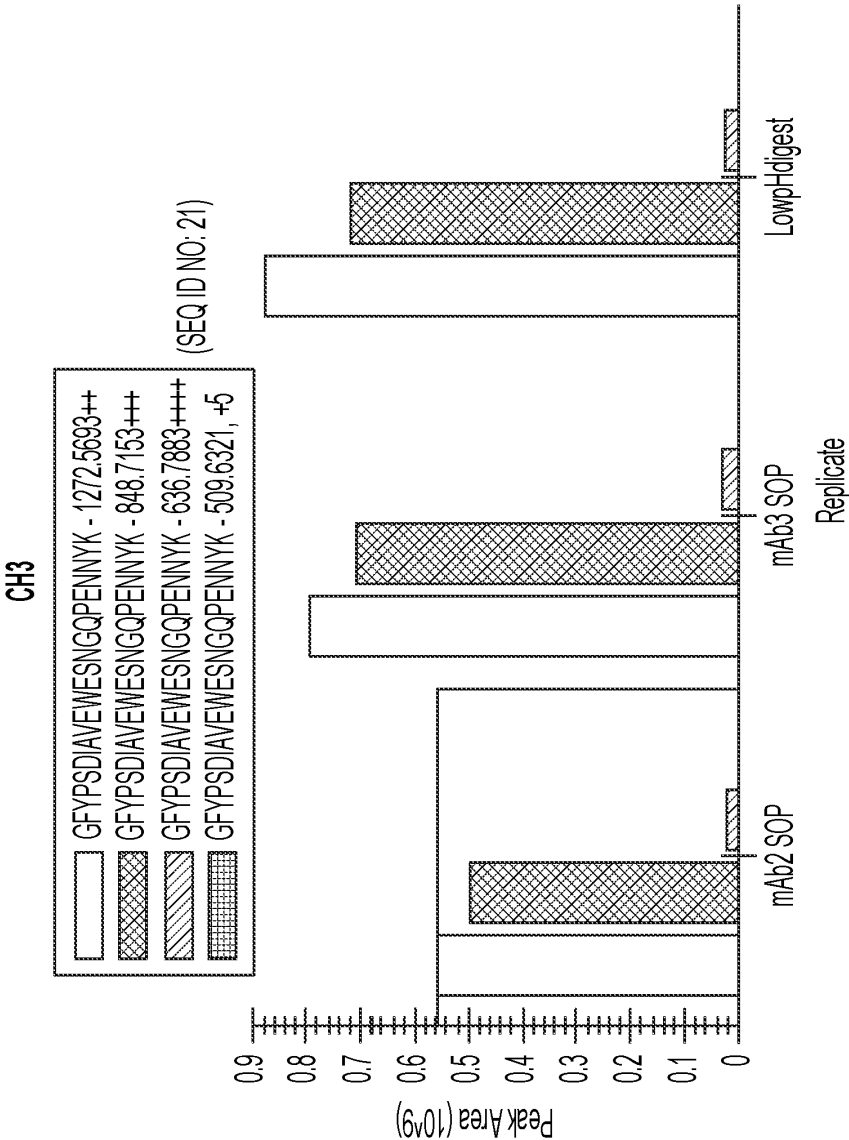


FIG. 19D

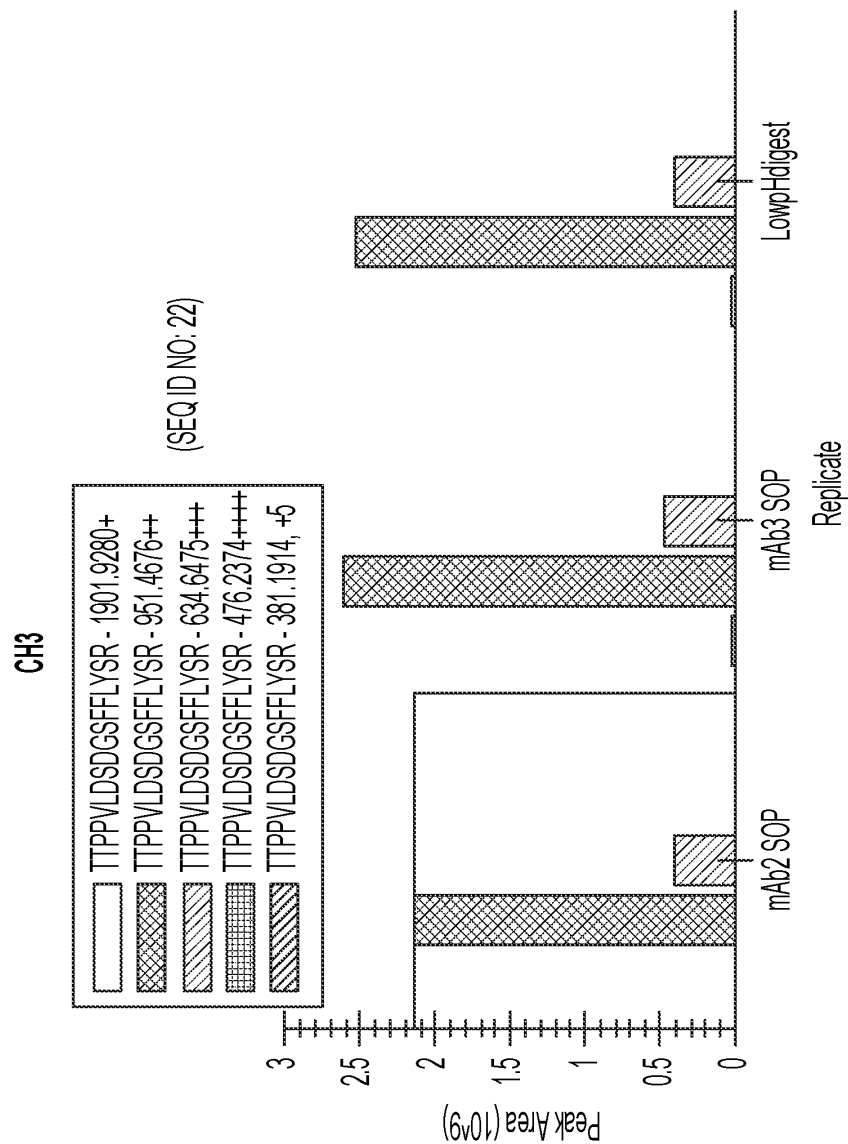


FIG. 19D CONT.

42/66

Peptide 1	Peptide 2	mAb2 SOP	mAb3 SOP	Low pH Digest
C152H	C152H	0.10%	0.05%	0.00%
C152H	C139H	10.00%	4.54%	0.00%
C152H	C219L	0.70%	0.43%	0.00%
C152H	C372H	0.39%	0.20%	0.00%
C152H	C430H	0.51%	0.22%	0.00%
C152H	C96H	0.89%	0.67%	0.00%
C152H	C199L	0.30%	0.44%	0.00%
C152H	C266H	0.24%	0.11%	0.00%
C152H	C23L	1.98%	1.26%	0.00%
C152H	C93L	0.55%	0.22%	0.00%
C152H	C22H	1.40%	0.71%	0.00%
C152H	C326H	0.24%	0.14%	0.00%
C152H	C139L	0.55%	0.24%	0.00%
C208H	C208H	0.89%	0.18%	0.00%
C208H	C139H	1.93%	0.50%	0.00%
C208H	C219L	0.38%	0.48%	0.00%
C208H	C372H	0.83%	0.52%	0.00%
C208H	C430H	0.38%	0.21%	0.00%
C208H	C96H	0.68%	0.43%	0.00%
C208H	C199L	0.26%	0.16%	0.00%
C208H	C266H	1.23%	0.71%	0.00%
C208H	C23L	2.67%	0.72%	0.00%
C208H	C93L	Interference	Interference	0.00%
C208H	C22H	0.81%	0.39%	0.00%
C208H	C326H	0.16%	0.09%	0.00%
C208H	C139L	0.87%	0.29%	0.00%
C139H	C139H	0.17%	0.00%	0.00%
C139H	C372H	0.29%	0.09%	0.00%
C139H	C430H	0.39%	0.10%	0.00%
C139H	C96H	1.52%	0.74%	0.00%
C139H	C199L	0.35%	0.25%	0.00%
C139H	C266H	0.19%	0.05%	0.00%
C139H	C23L	1.22%	2.18%	0.00%
C139H	C93L	0.41%	0.13%	0.00%

FIG. 20A

43/66

Peptide 1	Peptide 2	mAb2 SOP	mAb3 SOP	Low pH Digest
C139H	C22H	0.99%	0.38%	0.00%
C139H	C326H	Interference	Interference	0.00%
C139H	C139L	0.38%	0.09%	0.00%
C219L	C219L	0.02%	0.00%	0.00%
C219L	C372H	Interference	Interference	0.00%
C219L	C430H	0.16%	0.01%	0.00%
C219L	C96H	0.21%	0.05%	0.00%
C219L	C199L	1.15%	0.25%	0.00%
C219L	C266H	ND	ND	ND
C219L	C23L	1.86%	0.24%	0.00%
C219L	C93L	0.24%	0.03%	0.00%
C219L	C22H	0.45%	0.06%	0.00%
C219L	C326H	0.04%	0.00%	0.00%
C219L	C139L	0.90%	0.26%	0.00%
C372H	C372H	Interference	Interference	0.00%
C372H	C96H	Interference	Interference	0.00%
C372H	C199L	0.07%	0.07%	0.00%
C372H	C266H	0.64%	0.40%	0.00%
C372H	C23L	0.66%	0.23%	0.00%
C372H	C93L	0.32%	0.14%	0.00%
C372H	C22H	0.92%	0.44%	0.00%
C372H	C326H	0.88%	0.73%	0.00%
C372H	C139L	Interference	Interference	0.00%
C430H	C430H	0.05%	0.04%	0.00%
C430H	C96H	0.59%	0.25%	0.00%
C430H	C199L	0.06%	0.05%	0.00%
C430H	C266H	ND	ND	ND
C430H	C23L	0.51%	0.18%	0.00%
C430H	C93L	Interference	Interference	0.00%
C430H	C22H	0.85%	0.35%	0.00%
C430H	C326H	0.52%	0.40%	0.00%
C430H	C139L	0.40%	0.21%	0.00%

FIG. 20B

44/66

Peptide 1	Peptide 2	mAb2 SOP	mAb3 SOP	Low pH Digest
C96H	C96H	0.09%	0.03%	0.00%
C96H	C199L	0.17%	0.17%	0.00%
C96H	C266H	0.28%	0.18%	0.00%
C96H	C23L	1.30%	0.56%	0.00%
C96H	C93L	0.57%	0.23%	0.00%
C96H	C326H	0.15%	0.09%	0.00%
C96H	C139L	0.41%	0.28%	0.00%
C199L	C199L	0.01%	0.00%	0.00%
C199L	C266H	ND	ND	ND
C199L	C23L	ND	ND	ND
C199L	C93L	ND	ND	ND
C199L	C22H	0.33%	0.21%	0.00%
C199L	C326H	0.08%	0.07%	0.00%
C266H	C266H	ND	ND	ND
C266H	C23L	ND	ND	ND
C266H	C93L	ND	ND	ND
C266H	C22H	1.29%	0.74%	0.00%
C266H	C139L	Interference	Interference	0.00%
C23L	C23L	ND	ND	ND
C23L	C22H	2.04%	0.80%	0.00%
C23L	C326H	0.98%	0.29%	0.00%
C23L	C139L	1.47%	0.64%	0.00%
C93L	C93L	ND	ND	ND
C93L	C22H	0.51%	0.22%	0.00%
C93L	C326H	Interference	Interference	0.00%
C93L	C139L	1.61%	1.04%	0.00%
C22H	C22H	0.26%	0.12%	0.00%
C22H	C326H	0.23%	0.12%	0.00%
C22H	C139L	0.72%	0.31%	0.00%
C326H	C326H	ND	ND	ND
C326H	C139L	Interference	Interference	0.00%
C139L	C139L	0.15%	0.03%	0.00%

FIG. 20C

Scrambling % =
$$\frac{\text{(Peak Area of Scrambled Disulfide)}}{\text{(Avg Peak Area of Both Native Disulfides)} + \text{(Peak Area of Scrambled Disulfide)}}$$

FIG. 20D

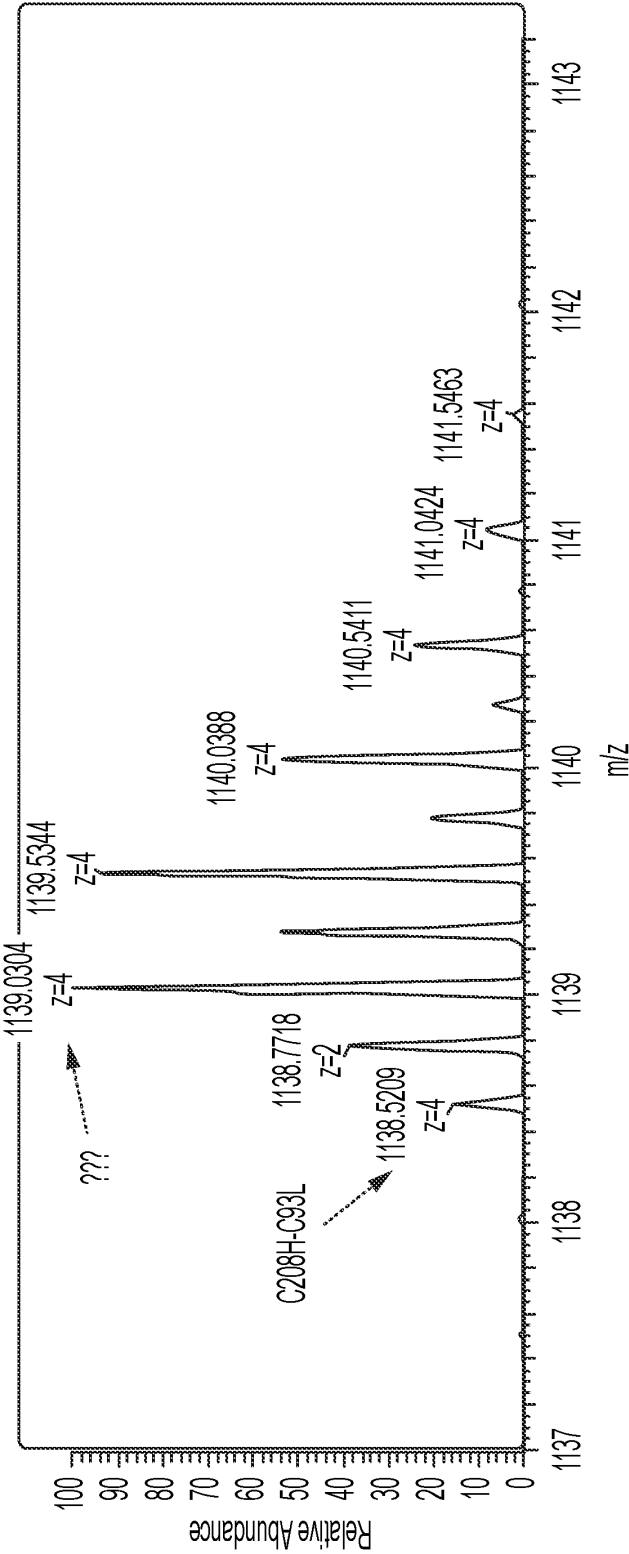


FIG. 20E

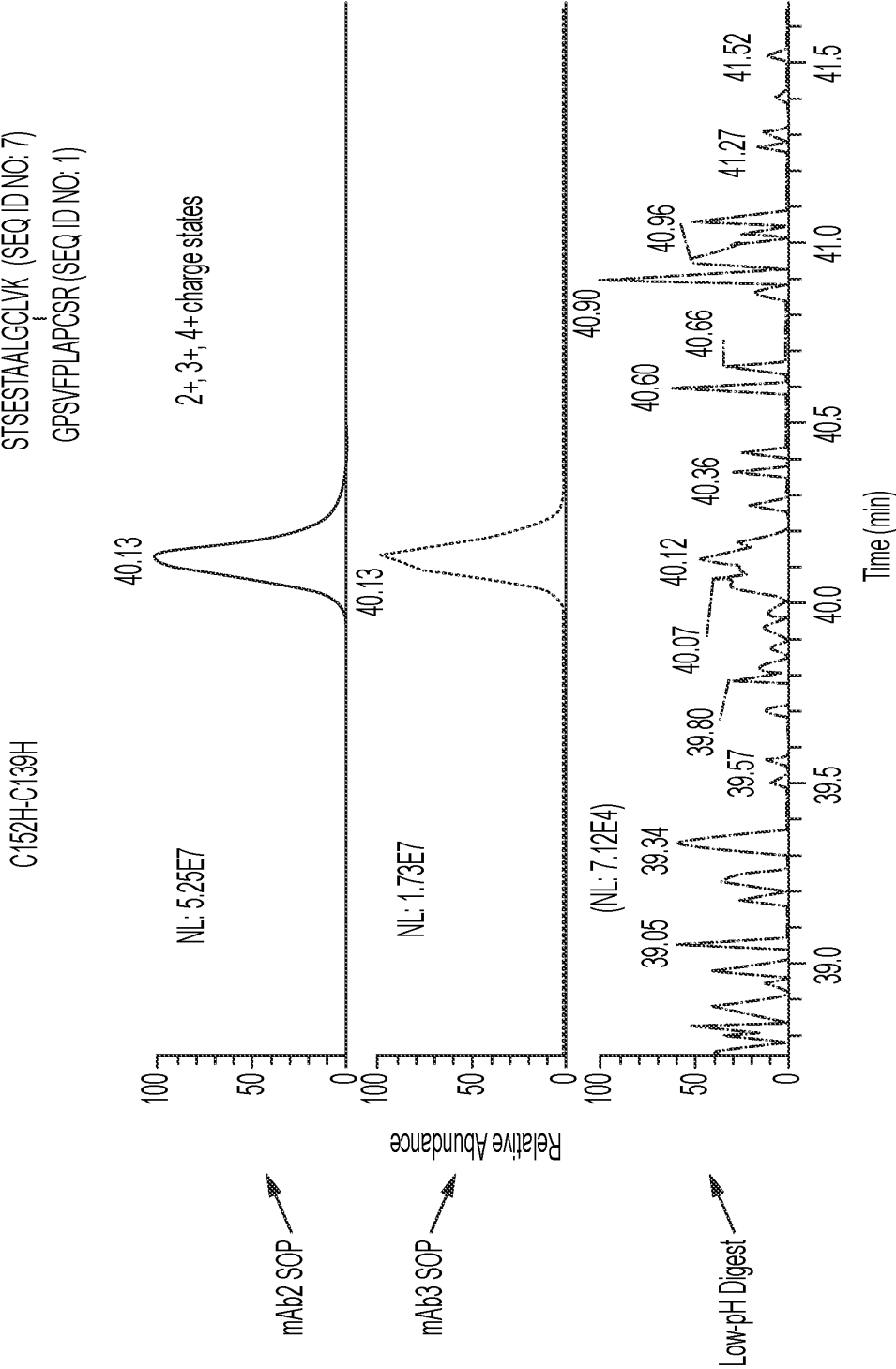


FIG. 21A

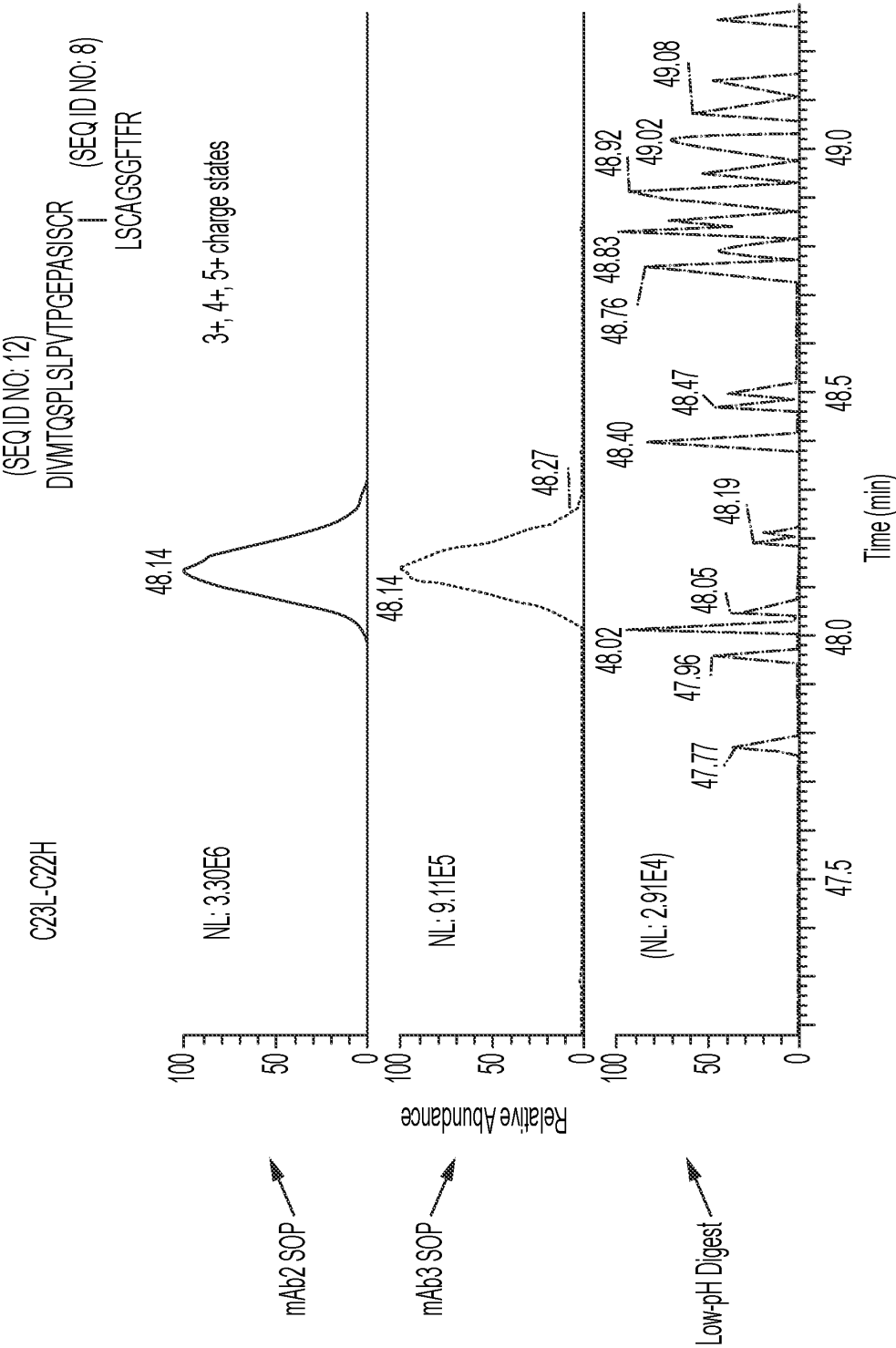


FIG. 21B

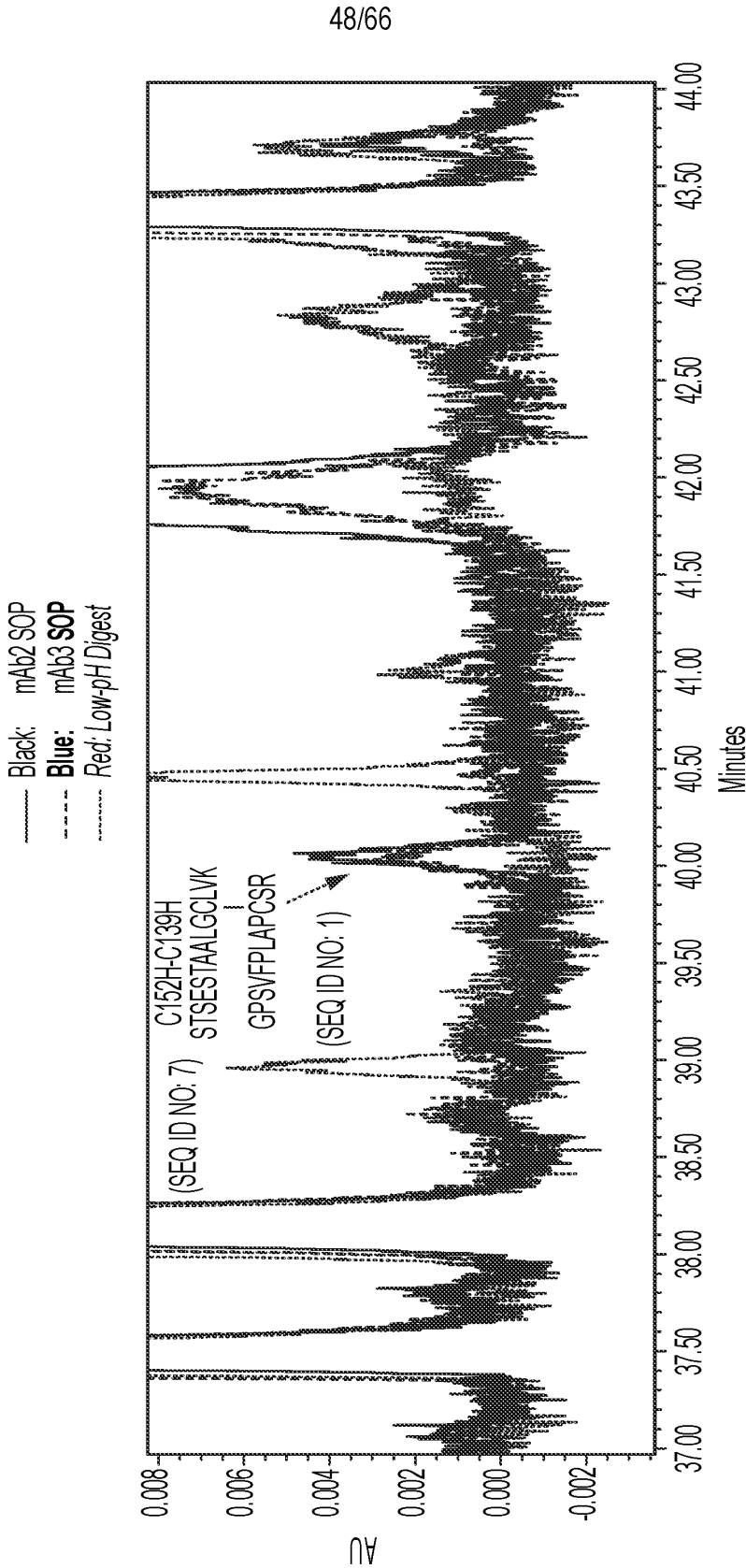
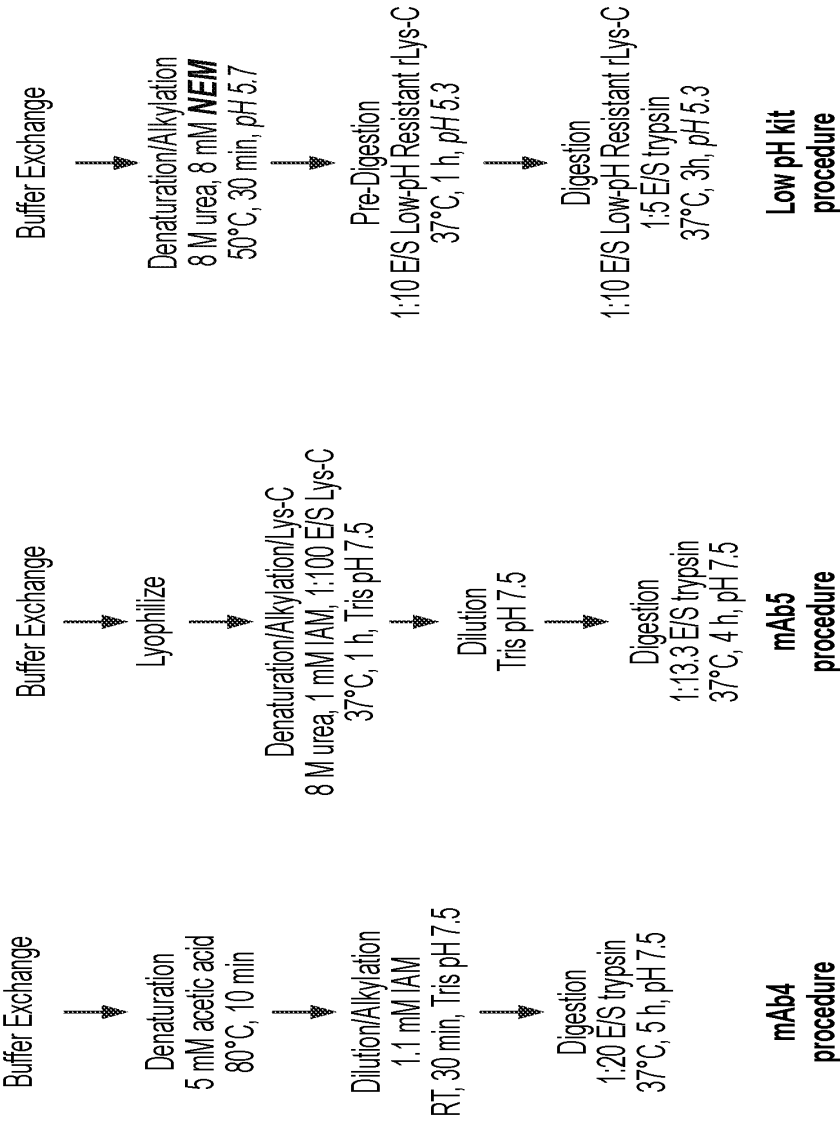


FIG. 22



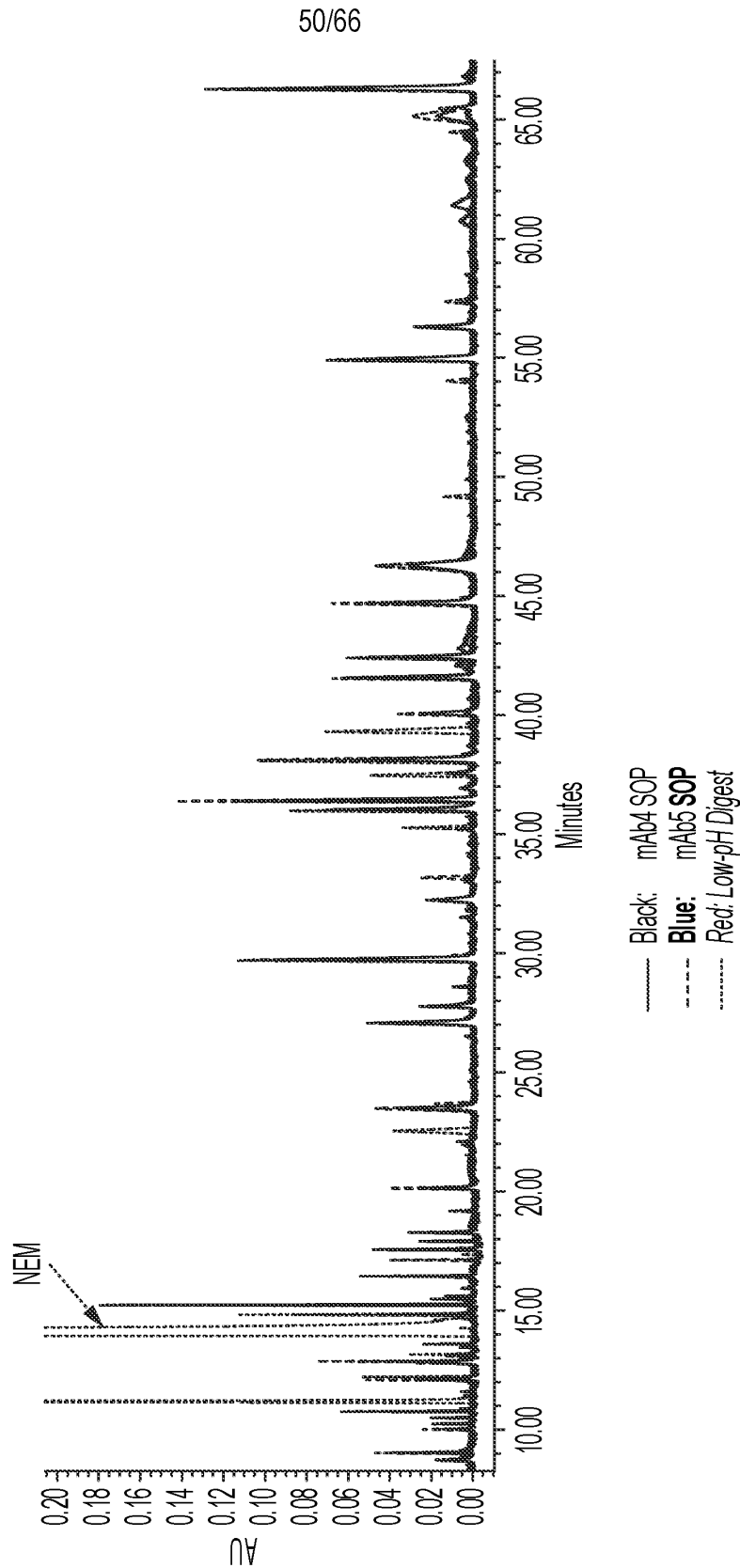


FIG. 24

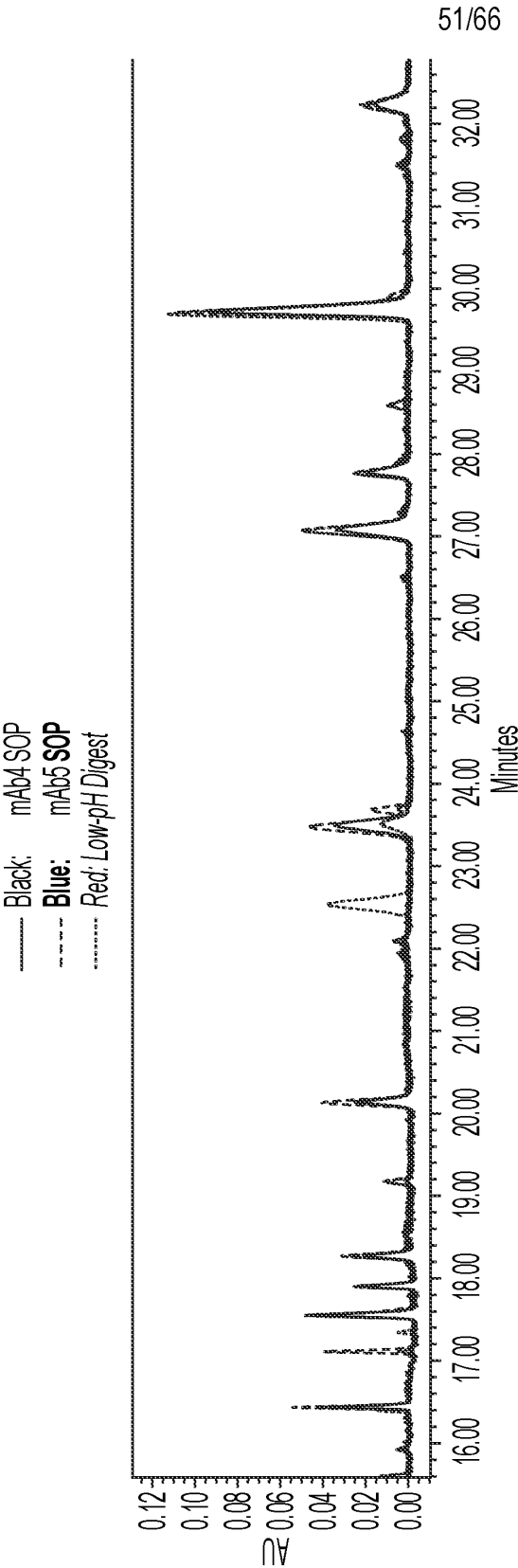


FIG. 25A

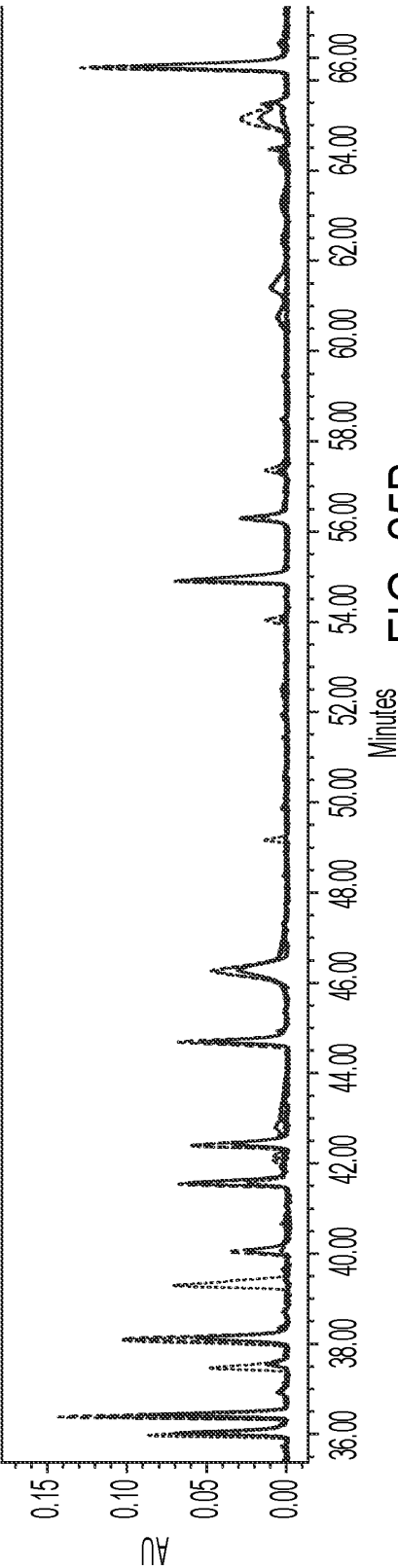
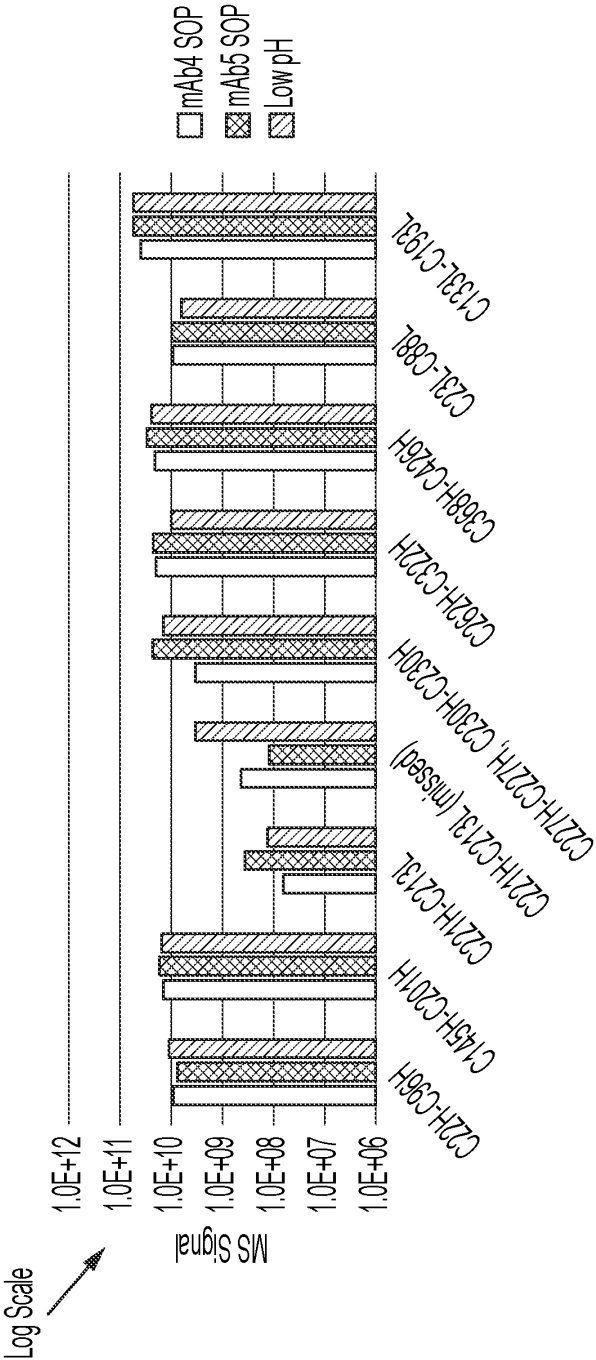


FIG. 25B



Native Disulfide Peptides

FIG. 26

53/66

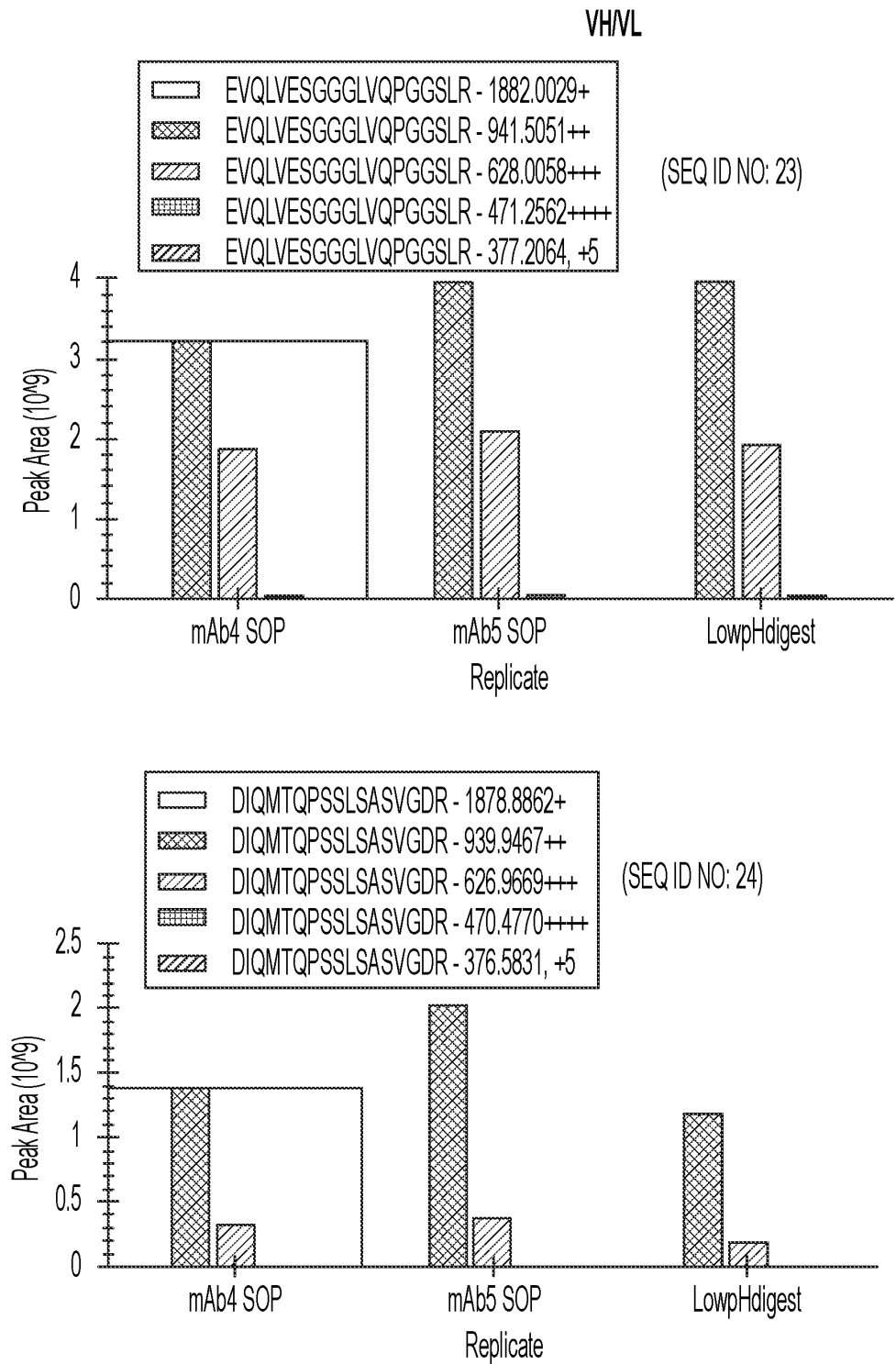


FIG. 27A

54/66

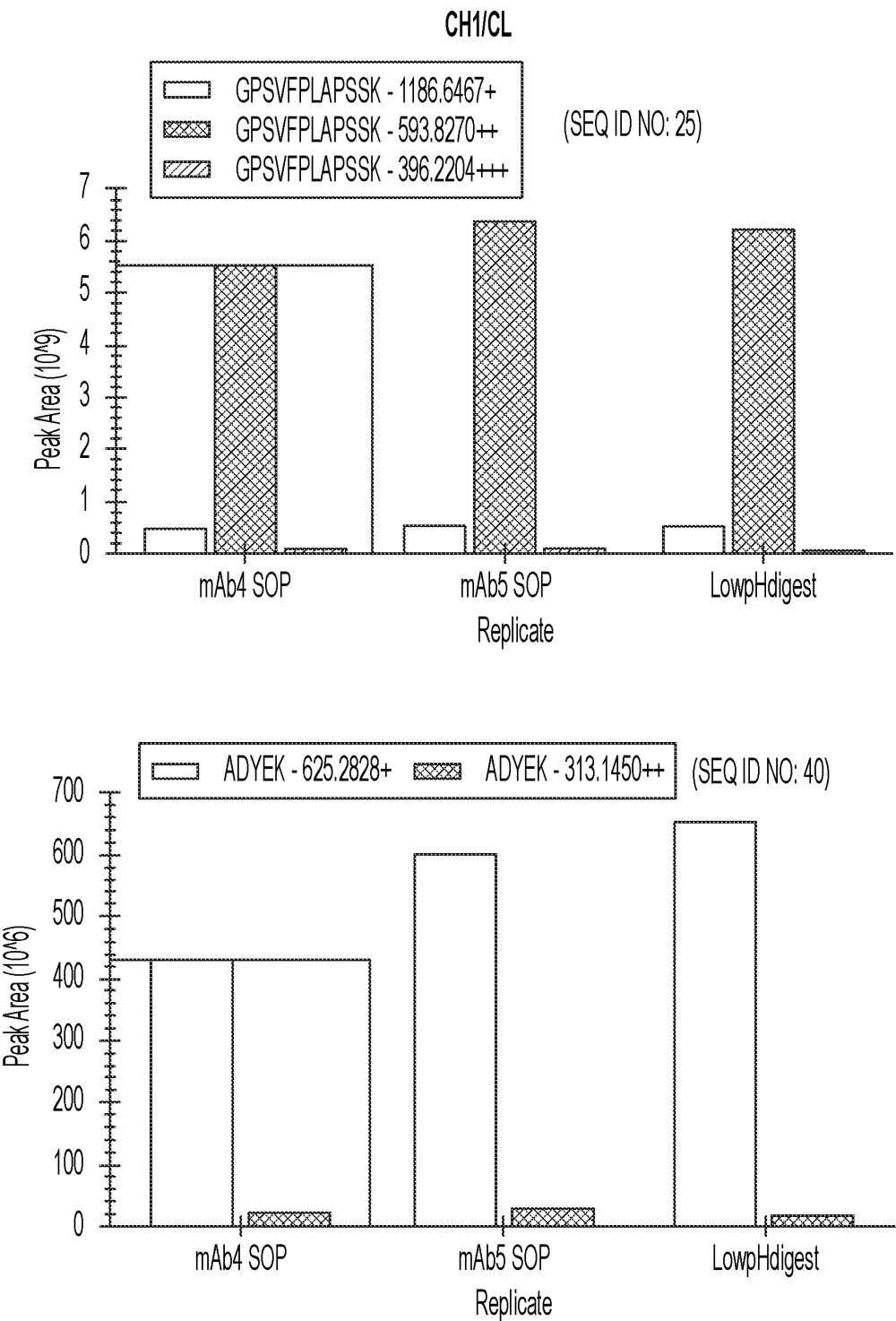


FIG. 27B

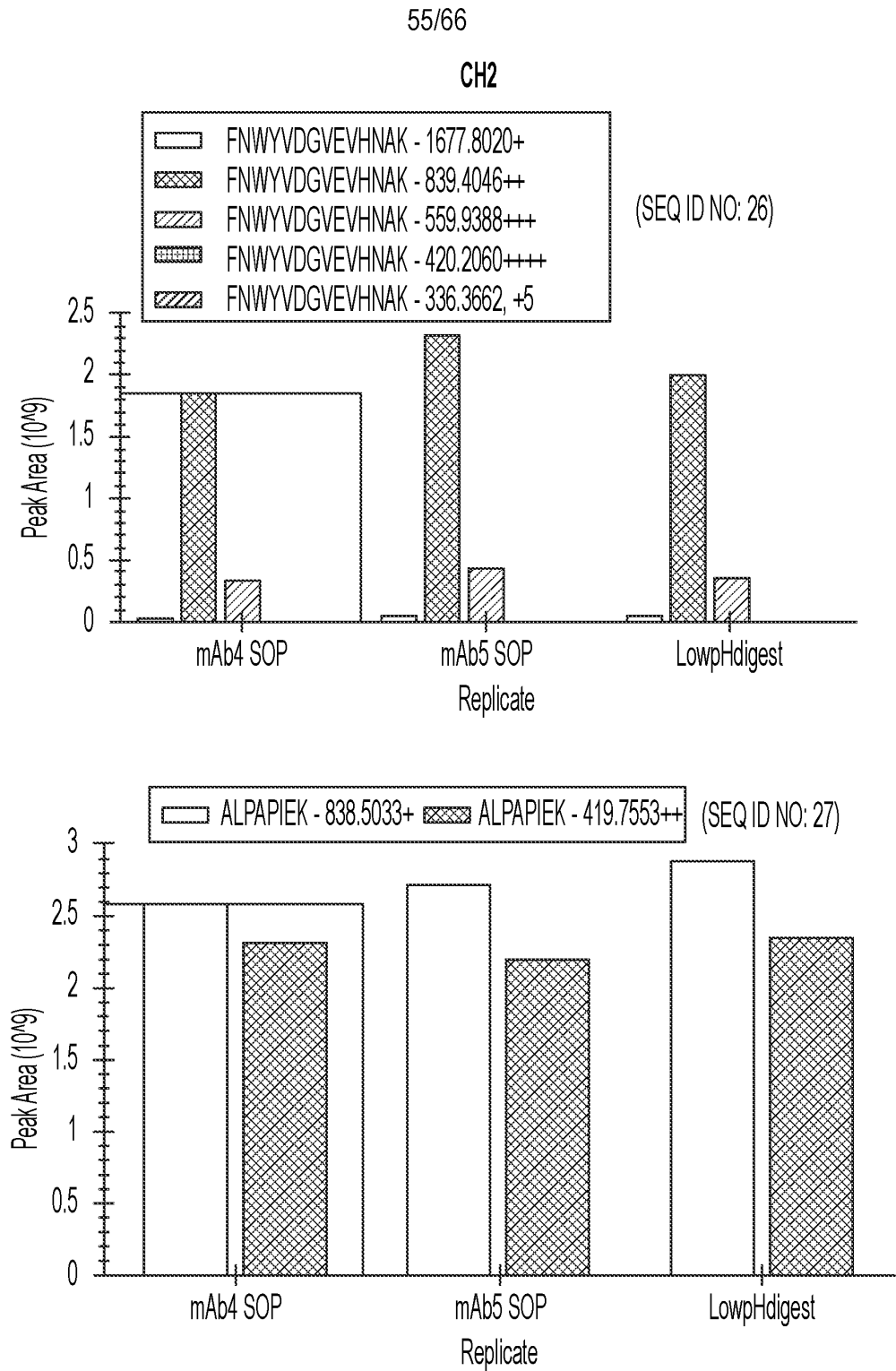


FIG. 27C

56/66

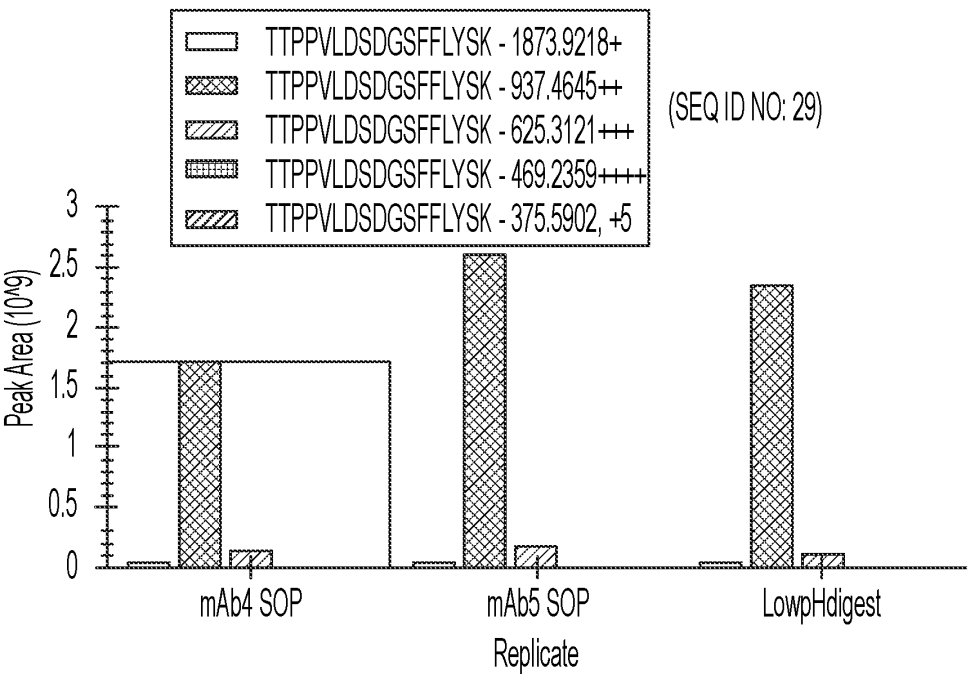
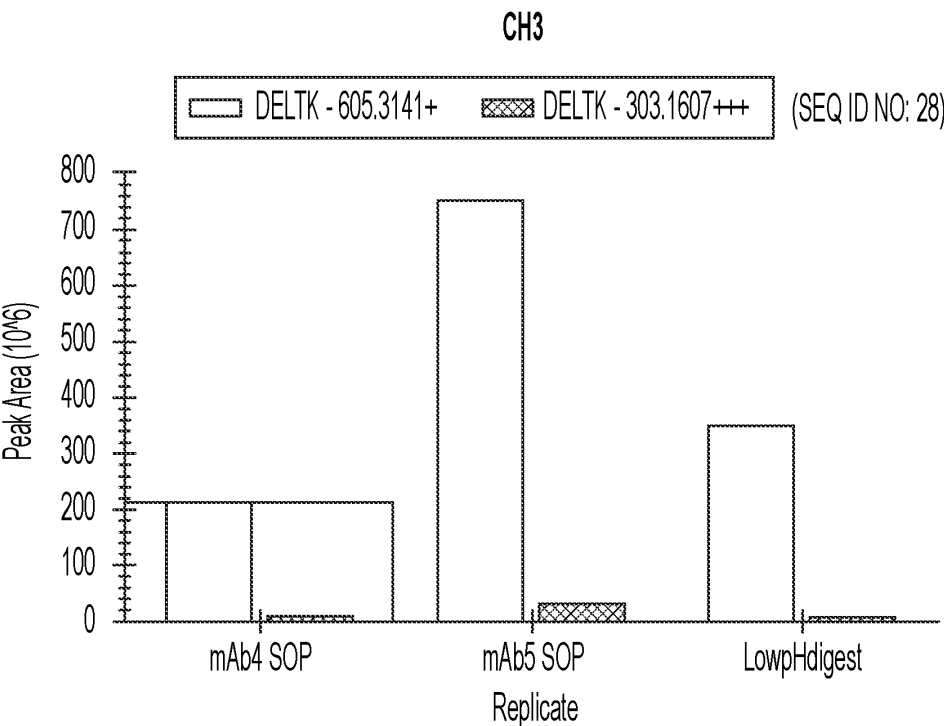


FIG. 27D

Cysteine Label	mAb5 Tryptic Peptide
C22H	LSCAASGFTSSYAMNWVR (SEQ ID NO: 30)
C96H	AEDTAVYYCAK (SEQ ID NO: 41)
C145H	STSGGTAALGCLVK (SEQ ID NO: 31)
C201H	DYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSWTPVPSSSLGTQTYICNVNHHKPSNTK (SEQ ID NO: 32)
C221H	SCDK (SEQ ID NO: 33)
C262H	TPEVTCWWDVSHEDPEVK (SEQ ID NO: 34)
C322H	CK
C368H	NQVSLTCLVK (SEQ ID NO: 42)
C426H	WQQGNVFSCSVMHEALHNHYTQK (SEQ ID NO: 43)
C23L	VTTCR (SEQ ID NO: 35)
C88L	FSGSGGTDFLTITSSLPEDFATYCCQQSYSLTFGGGTR (SEQ ID NO: 36)
C133L	SGTASWCLLNNFYPR (SEQ ID NO: 44)
C193L	VYACEVTHQGLSPVTK (SEQ ID NO: 45)
C213L	GEC/SFNRGEC

FIG. 28

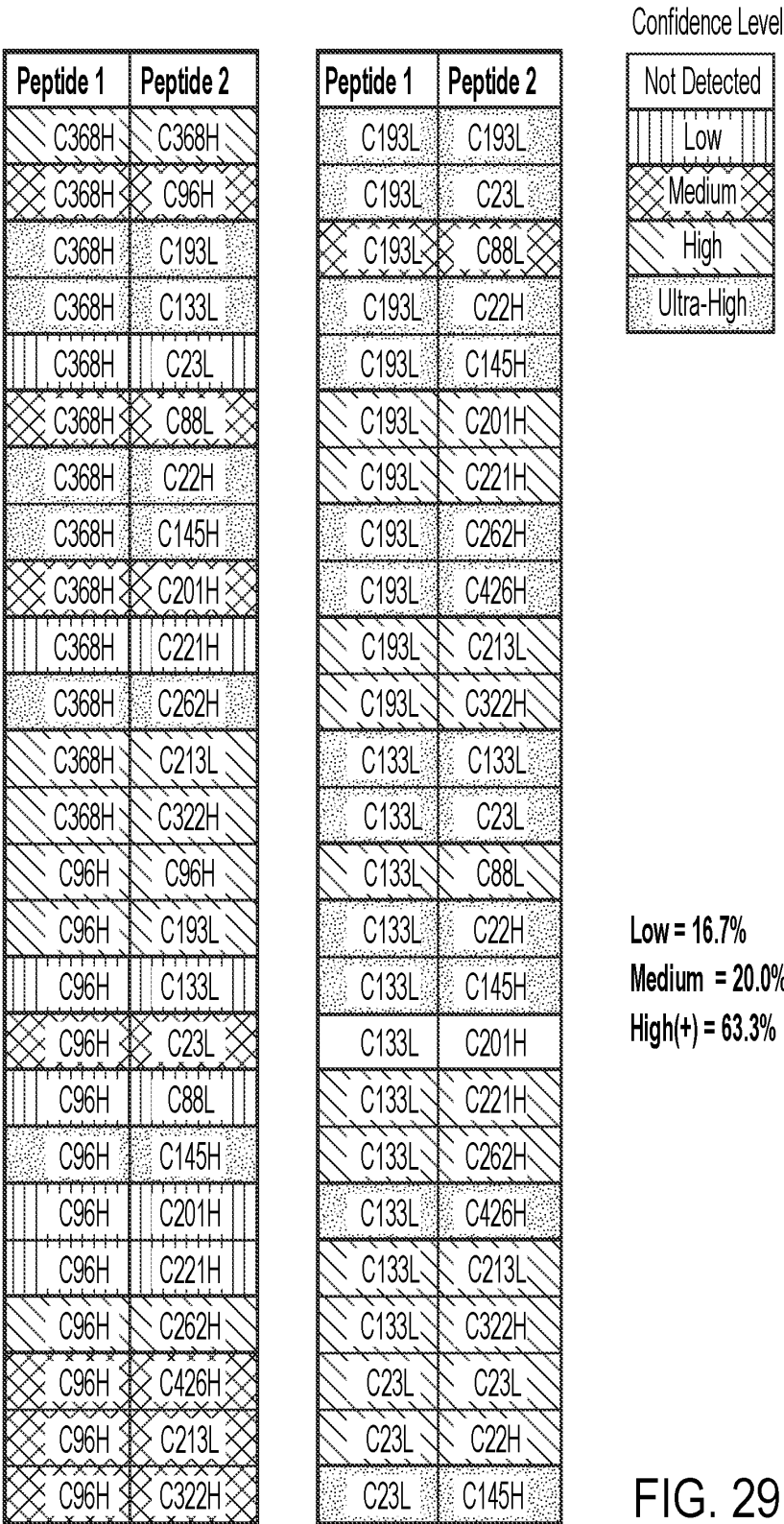


FIG. 29

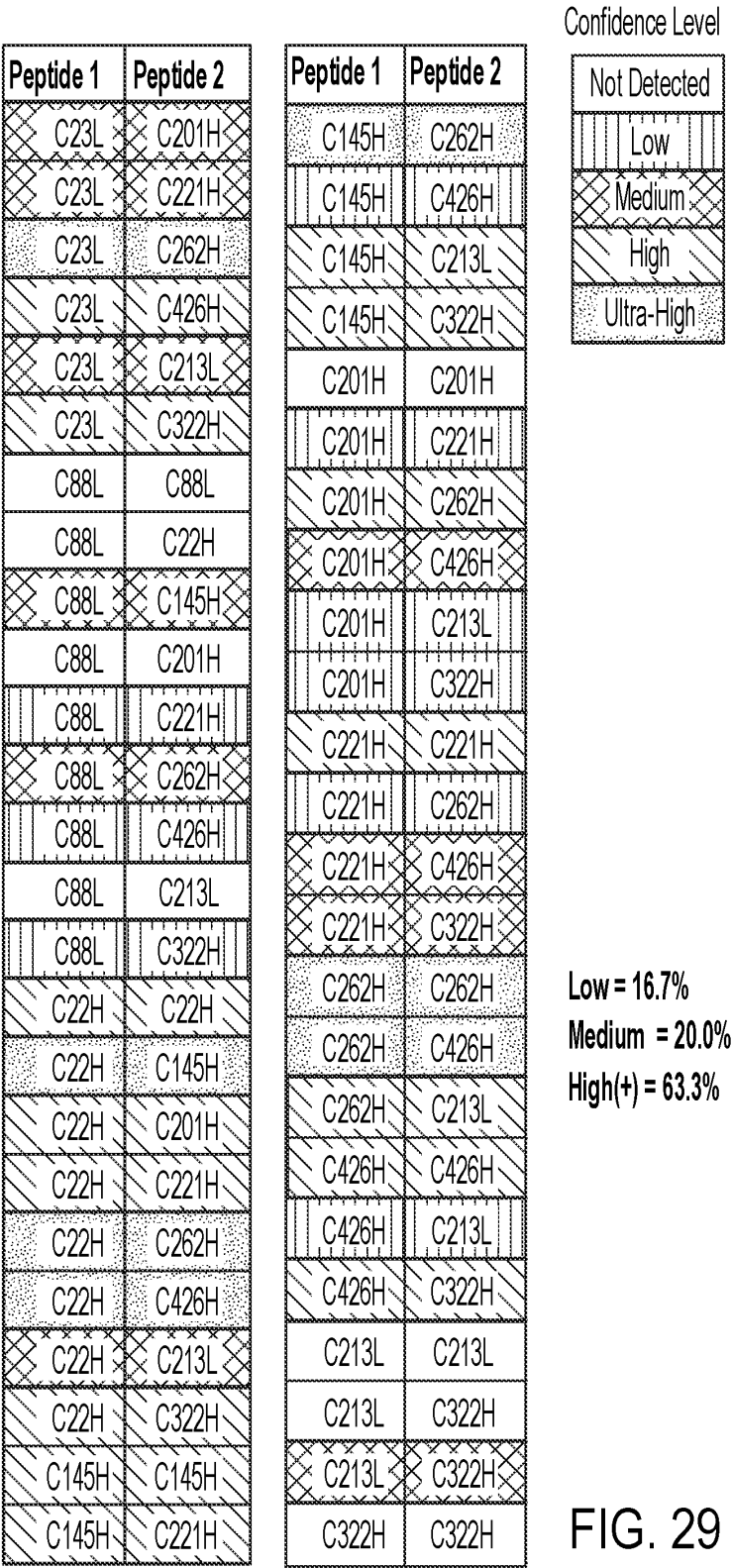


FIG. 29 CONT.

60/66

Peptide 1	Peptide 2	mAb4 SOP	mAb5 SOP	Low pH Digest
C368H	C368H	0.31%	0.33%	0.00%
C368H	C96H	0.30%	1.01%	0.00%
C368H	C193L	0.66%	1.14%	0.00%
C368H	C133L	1.56%	1.08%	0.00%
C368H	C23L	0.96%	0.32%	0.00%
C368H	C88L	0.41%	0.24%	0.00%
C368H	C22H	0.53%	0.81%	0.00%
C368H	C145H	0.65%	1.12%	0.00%
C368H	C201H	0.50%	0.66%	0.00%
C368H	C221H	0.08%	0.11%	0.00%
C368H	C262H	3.61%	1.07%	0.00%
C368H	C213L	0.14%	0.10%	0.00%
C368H	C213L (missed)	0.02%	0.00%	0.00%
C368H	C322H	2.12%	0.46%	0.00%
C96H	C96H	0.02%	0.11%	0.00%
C96H	C193L	0.10%	0.25%	0.00%
C96H	C133L	0.55%	0.69%	0.00%
C96H	C23L	0.19%	0.27%	0.00%
C96H	C88L	0.14%	0.10%	0.00%
C96H	C145H	4.22%	1.53%	0.00%
C96H	C201H	0.42%	0.29%	0.00%
C96H	C221H	ND	ND	ND
C96H	C262H	0.24%	0.40%	0.00%
C96H	C426H	0.59%	1.13%	0.00%

FIG. 30A

61/66

C96H	C213L	0.10%	0.05%	0.00%
C96H	C213L (missed)	ND	ND	ND
C96H	C322H	0.08%	0.12%	0.00%
C193L	C193L	0.16%	0.16%	0.00%
C193L	C23L	0.76%	0.21%	0.00%
C193L	C88L	0.25%	0.07%	0.00%
C193L	C22H	0.17%	0.03%	0.00%
C193L	C145H	0.83%	0.79%	0.00%
C193L	C201H	0.86%	0.32%	0.00%
C193L	C221H	0.22%	0.02%	0.00%
C193L	C262H	1.54%	0.99%	0.00%
C193L	C426H	0.68%	0.93%	0.00%
C193L	C213L	0.96%	0.02%	0.00%
C193L	C213L (missed)	0.33%	0.00%	0.00%

FIG. 30A CONT.

62/66

Peptide 1	Peptide 2	mAb4 SOP	mAb5 SOP	Low pH Digest
C193L	C322H	0.18%	0.17%	0.00%
C133L	C133L	0.22%	0.27%	0.00%
C133L	C23L	3.03%	0.49%	0.00%
C133L	C88L	0.64%	Interference	0.00%
C133L	C22H	0.57%	0.52%	0.00%
C133L	C145H	0.61%	0.42%	0.00%
C133L	C201H	1.01%	0.45%	0.00%
C133L	C221H	0.08%	0.03%	0.00%
C133L	C262H	2.59%	0.97%	0.00%
C133L	C426H	2.24%	1.48%	0.00%
C133L	C213L	0.29%	0.07%	0.00%
C133L	C213L (missed)	0.33%	0.00%	0.00%
C133L	C322H	0.93%	0.38%	0.00%
C23L	C23L	ND	ND	ND
C23L	C22H	0.47%	0.48%	0.00%
C23L	C145H	1.15%	0.67%	0.00%
C23L	C201H	0.78%	0.29%	0.00%
C23L	C221H	ND	ND	ND
C23L	C262H	1.52%	0.57%	0.00%
C23L	C426H	2.30%	0.88%	0.00%
C23L	C213L	ND	ND	ND
C23L	C213L (missed)	ND	ND	ND
C23L	C322H	0.29%	0.16%	0.00%

FIG. 30B

63/66

C88L	C88L	ND	ND	ND
C88L	C22H	ND	ND	ND
C88L	C145H	0.31%	0.19%	0.00%
C88L	C201H	ND	ND	ND
C88L	C221H	ND	ND	ND
C88L	C262H	0.28%	0.09%	0.00%
C88L	C426H	0.92%	0.22%	0.00%
C88L	C213L	ND	ND	ND
C88L	C213L (missed)	ND	ND	ND
C88L	C322H	0.16%	0.05%	0.00%
C22H	C22H	0.08%	0.09%	0.00%
C22H	C145H	1.70%	0.61%	0.00%
C22H	C201H	0.46%	0.18%	0.00%
C22H	C221H	0.16%	0.09%	0.00%

FIG. 30B CONT.

64/66

Peptide 1	Peptide 2	mAb4 SOP	mAb5 SOP	Low pH Digest
C22H	C262H	1.16%	1.13%	0.00%
C22H	C426H	Interference	0.89%	0.00%
C22H	C213L	0.52%	0.12%	0.00%
C22H	C213L (missed)	0.16%	0.00%	0.00%
C22H	C322H	0.20%	0.05%	0.00%
C145H	C145H	1.78%	0.79%	0.00%
C145H	C221H	0.84%	0.21%	0.00%
C145H	C262H	0.86%	0.83%	0.00%
C145H	C426H	1.03%	0.71%	0.00%
C145H	C213L	1.80%	0.19%	0.00%
C145H	C213L (missed)	1.45%	0.00%	0.00%
C145H	C322H	1.05%	0.64%	0.00%
C201H	C201H	ND	ND	ND
C201H	C221H	0.70%	0.00%	0.00%
C201H	C262H	0.68%	0.41%	0.00%
C201H	C426H	0.91%	0.62%	0.00%
C201H	C213L	1.09%	0.07%	0.00%
C201H	C213L (missed)	0.24%	0.00%	0.00%
C201H	C322H	0.31%	0.16%	0.00%
C221H	C221H	0.91%	0.14%	0.00%
C221H	C262H	ND	ND	ND
C221H	C426H	0.30%	0.13%	0.00%
C221H	C322H	ND	ND	ND

FIG. 30C

65/66

C262H	C262H	0.75%	0.06%	0.00%
C262H	C426H	1.57%	0.88%	0.00%
C262H	C213L	Interference	Interference	0.00%
C262H	C213L (missed)	ND	ND	ND
C426H	C426H	0.53%	0.68%	0.00%
C426H	C213L	0.63%	0.14%	0.00%
C426H	C213L (missed)	0.09%	0.00%	0.00%
C426H	C322H	1.24%	0.26%	0.00%
C213L	C213L	ND	ND	ND
C213L	C213L (missed)	ND	ND	ND
C213L	C322H	ND	ND	ND
C213L (missed)	C213L (missed)	ND	ND	ND
C213L (missed)	C322H	0.04%	0.00%	0.00%
C322H	C322H	ND	ND	ND

FIG. 30C CONT.

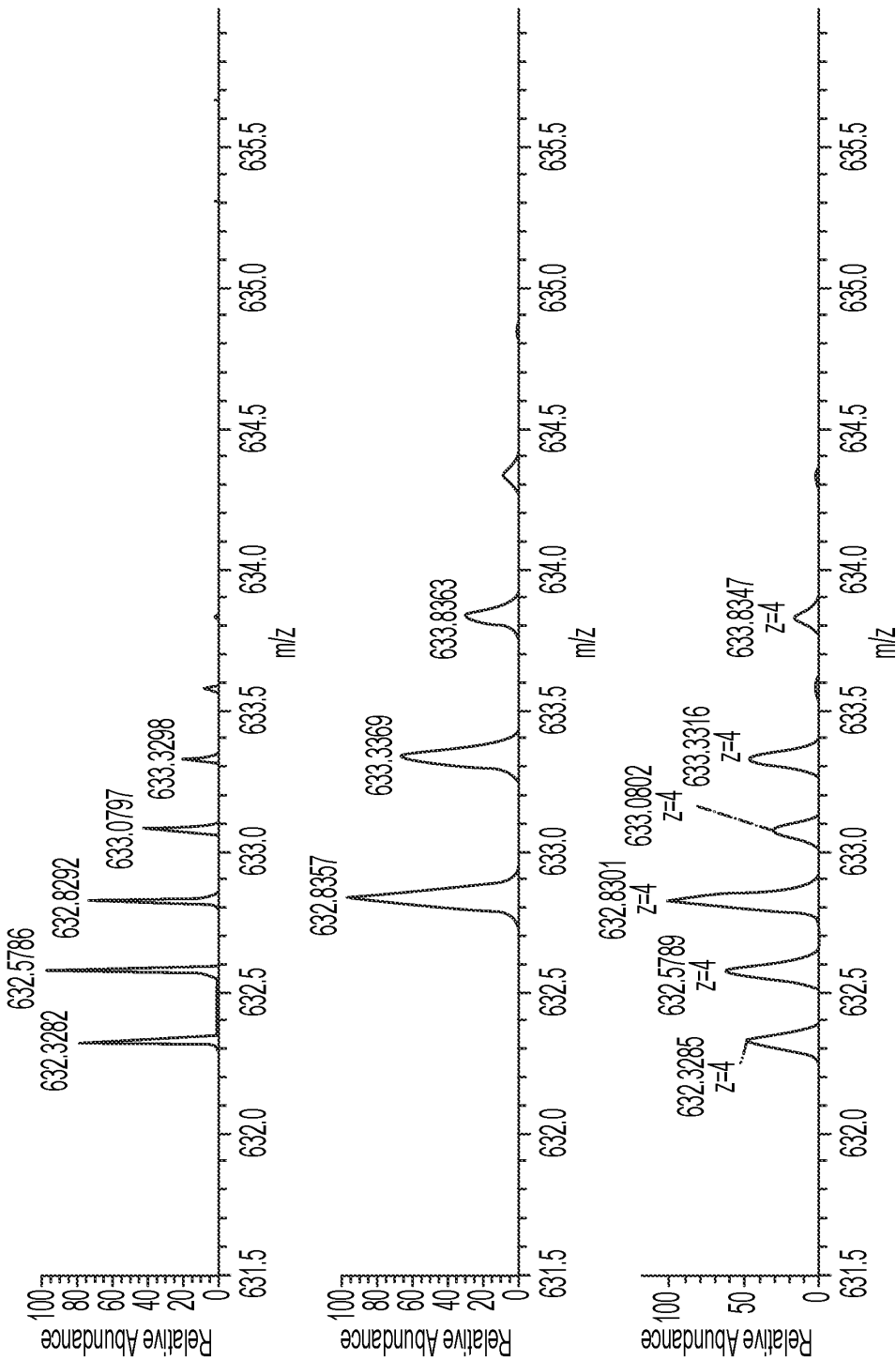


FIG. 31

STSGGTAALGCLVK (SEQ ID NO: 31)
STSGGTAALGCLVK