

Fig. 1

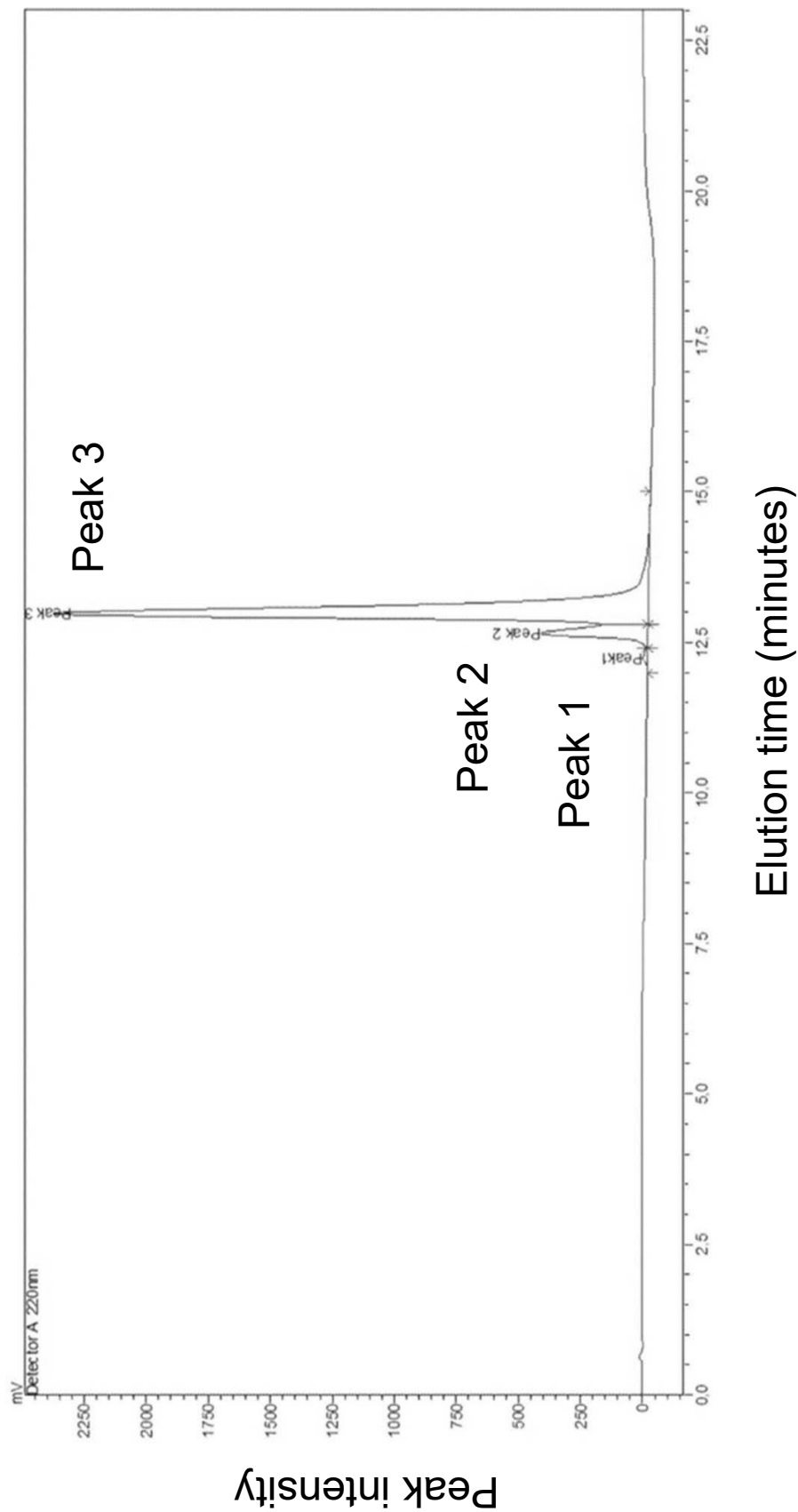


Fig. 2

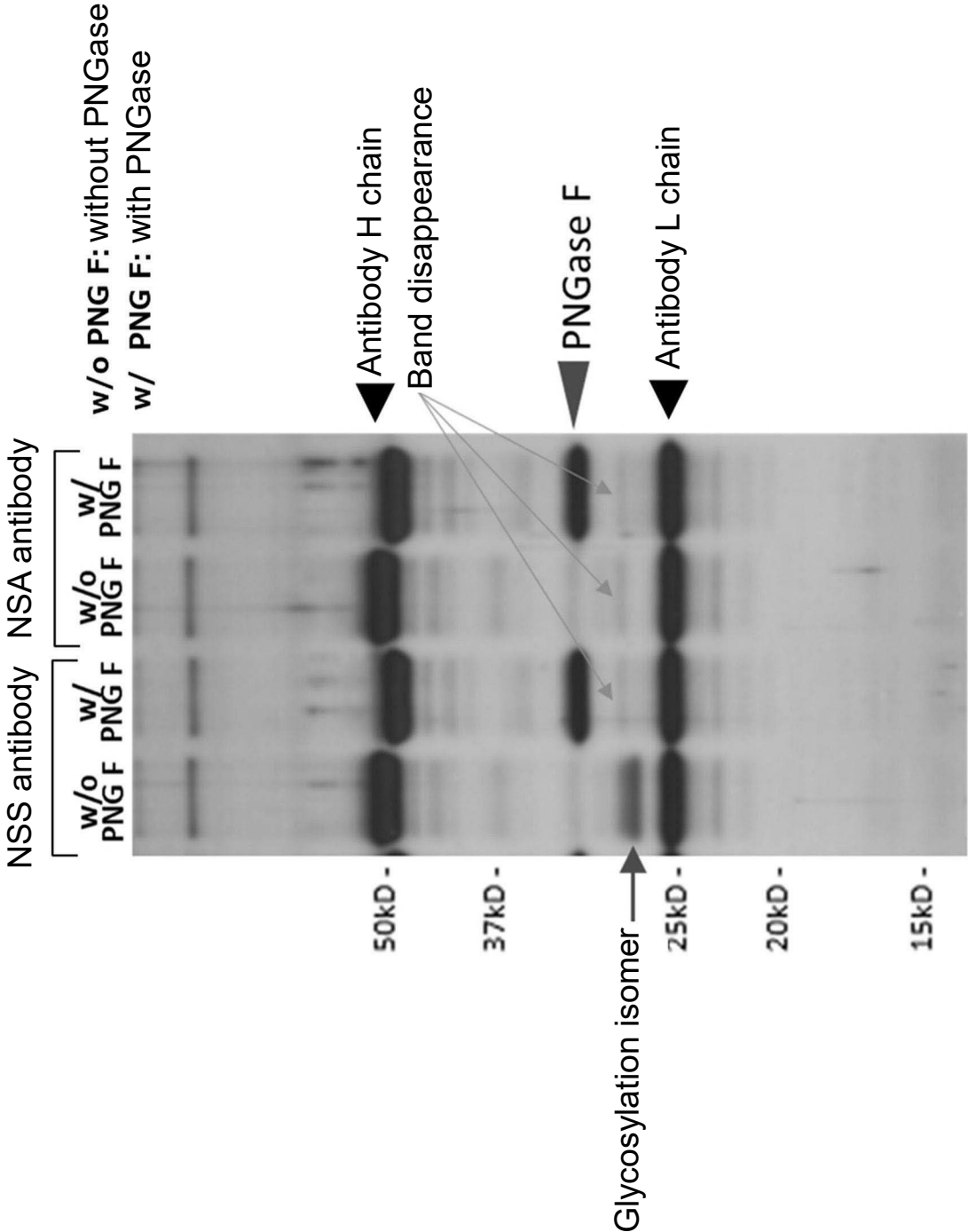
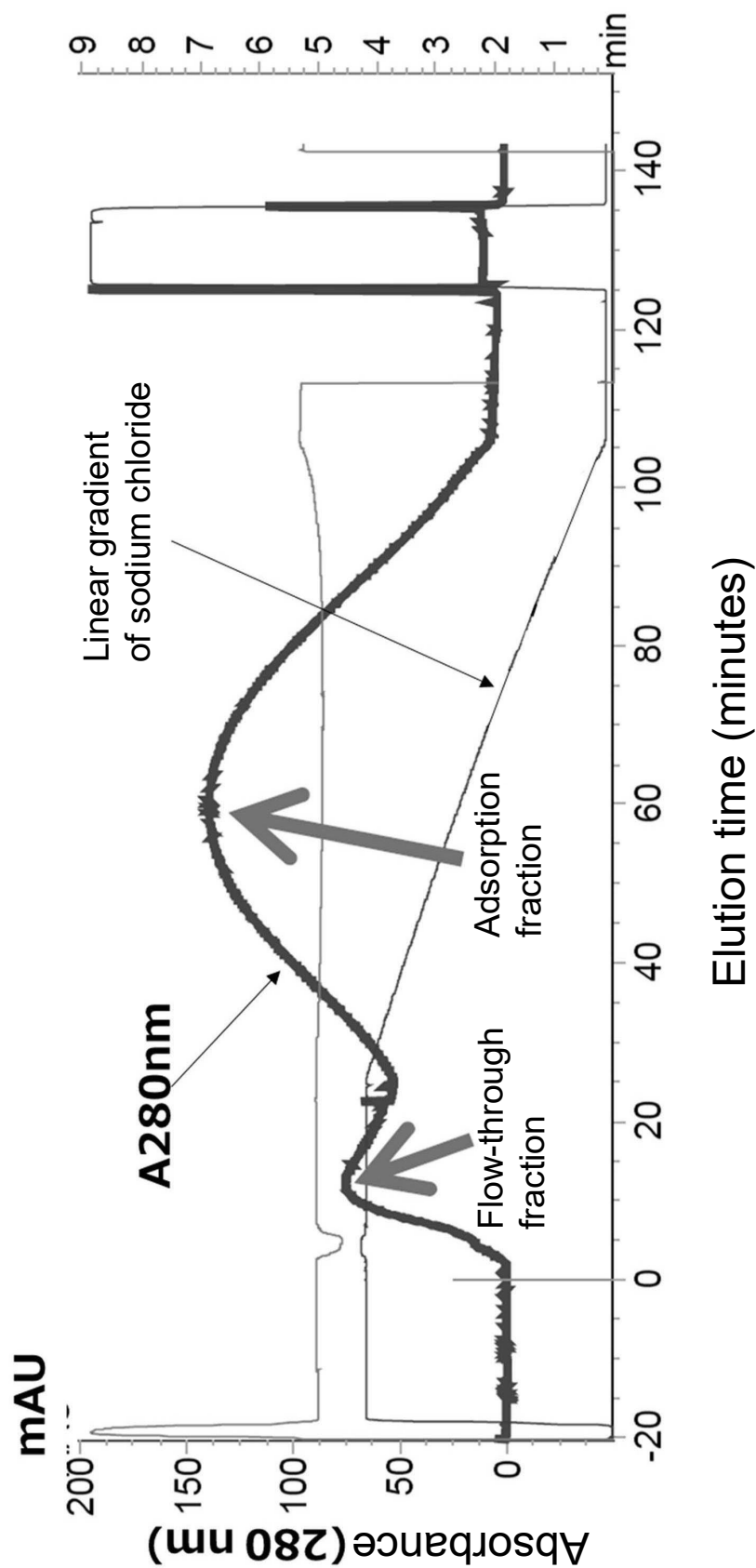
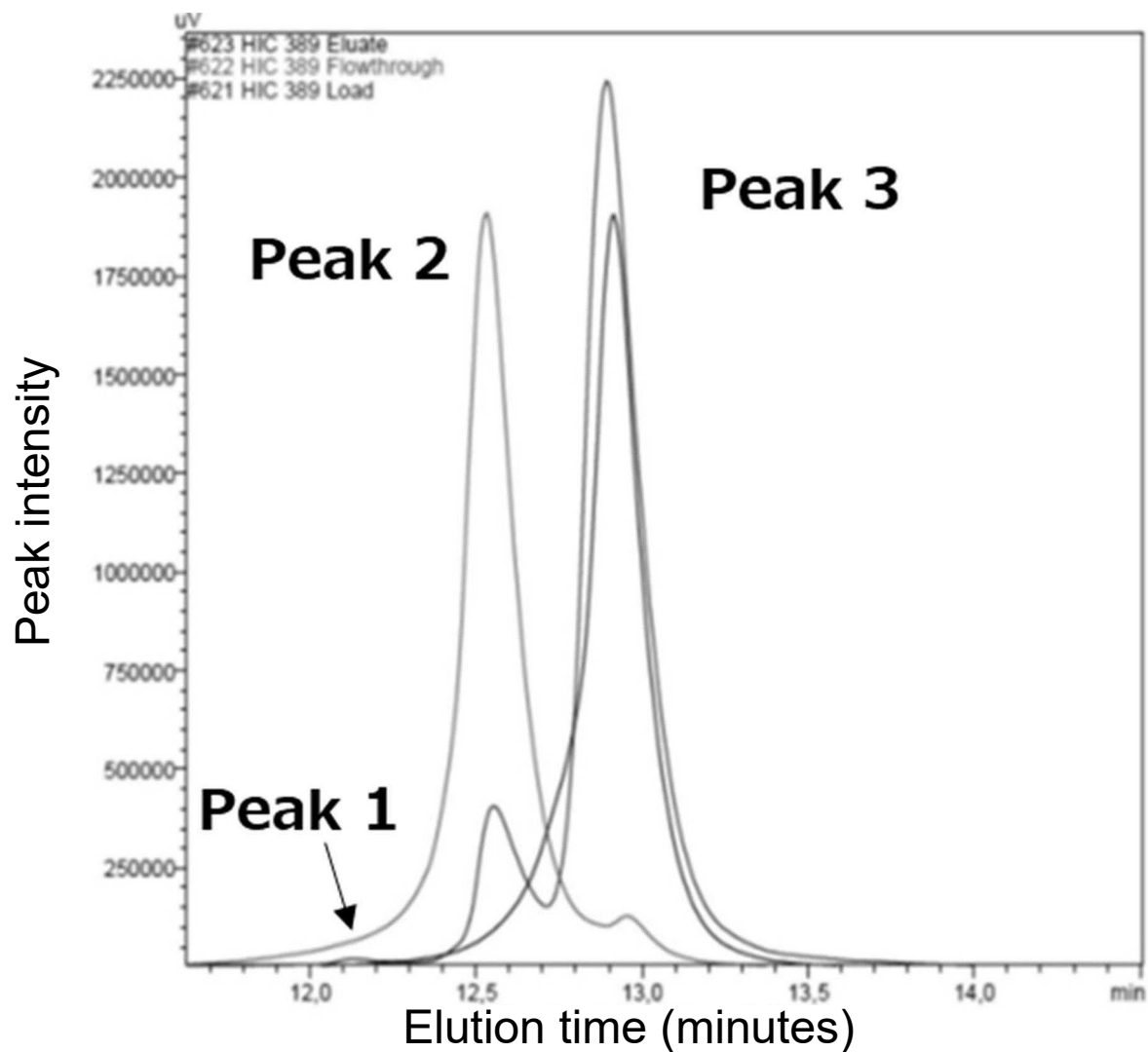


Fig. 3



HIC389

Fig. 4



Analyte	Peak 1 (%)	Peak 2 (%)	Peak 3 (%)
Loading sample	2. 1	12. 1	85. 8
Flow-through fraction	0	94. 2	5. 8
Elution fraction	0	0	100

Fig. 5A

Capto Butyl media

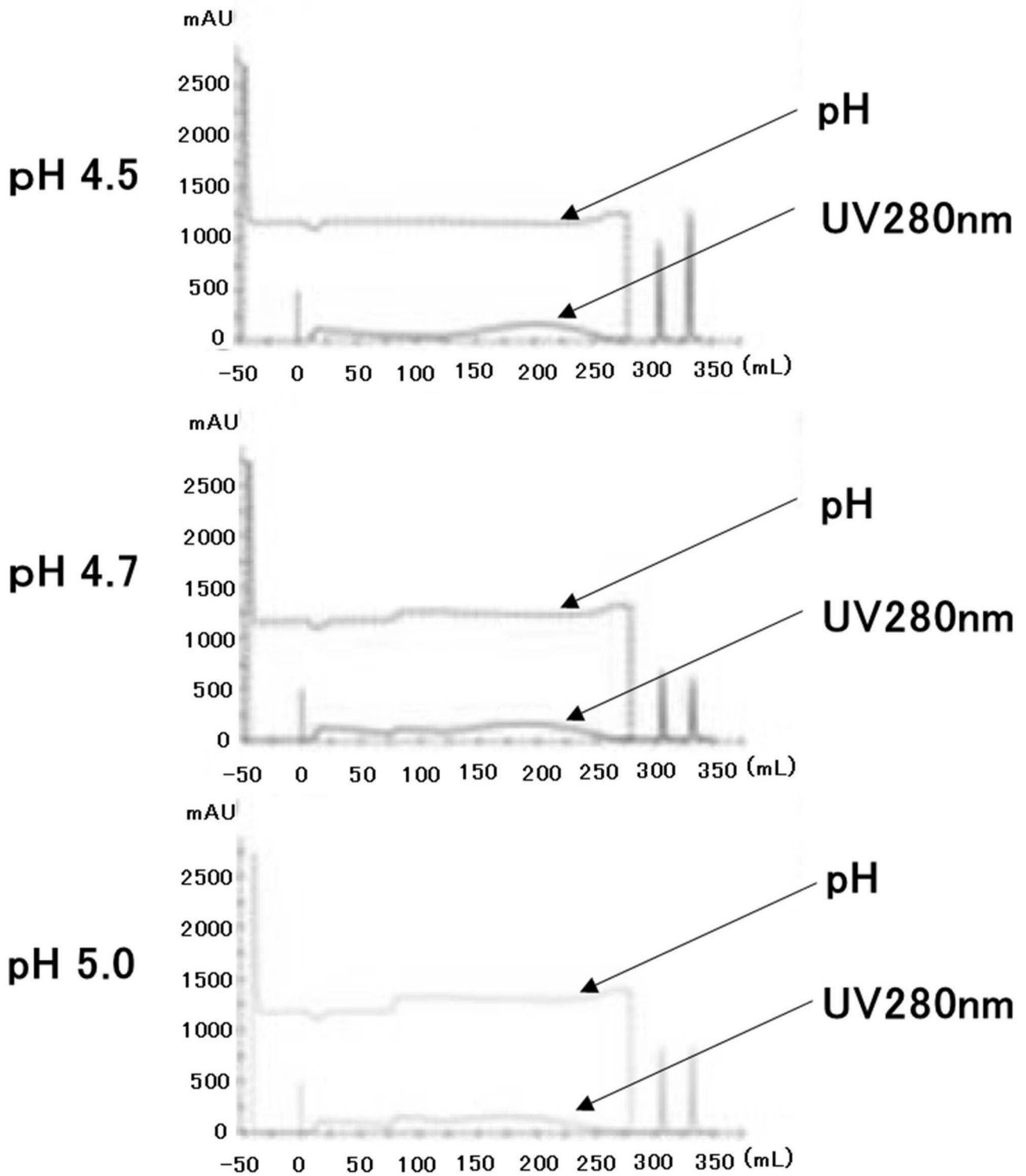


Fig. 5B

Poros Benzyl Ultra media

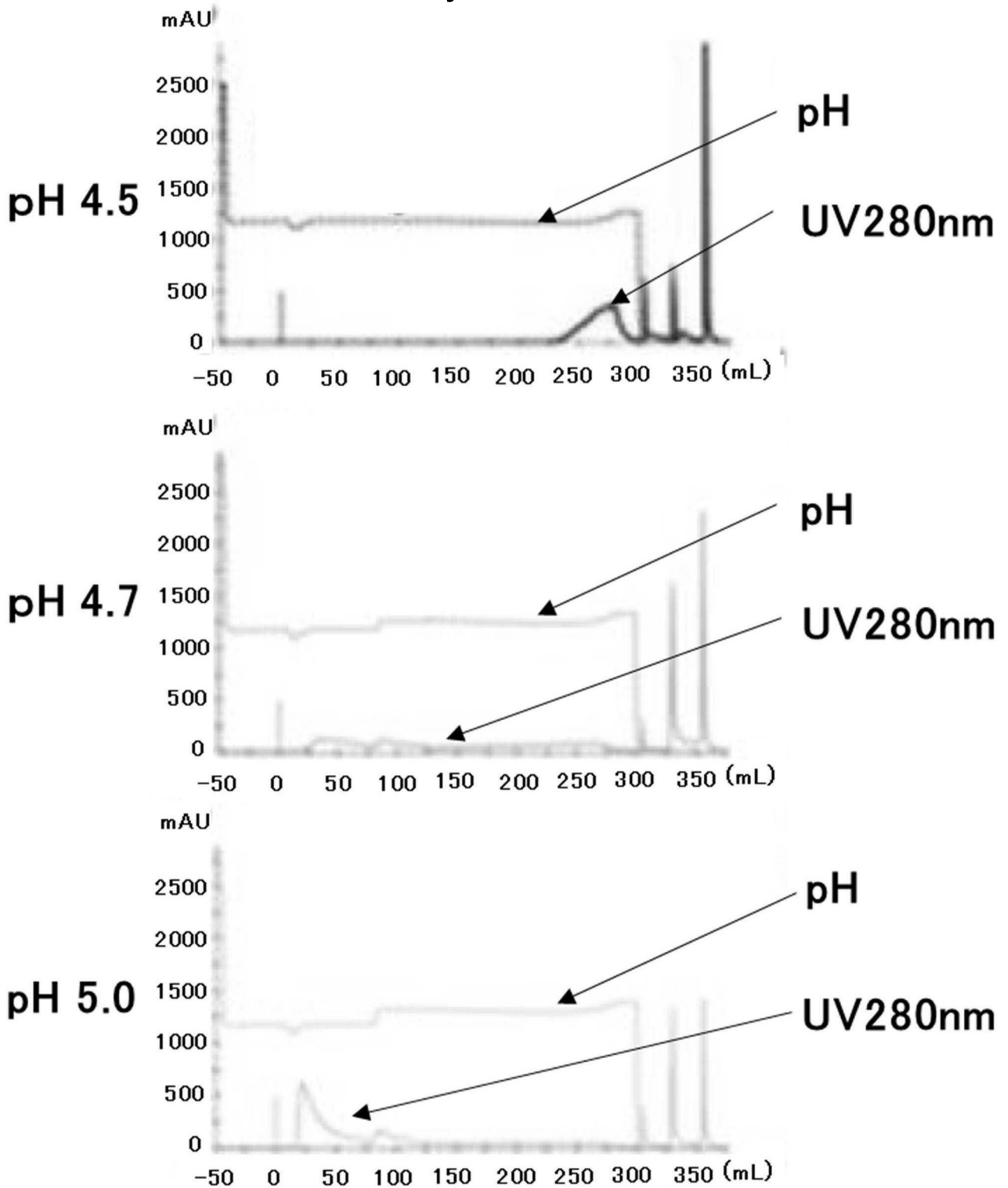


Fig. 6

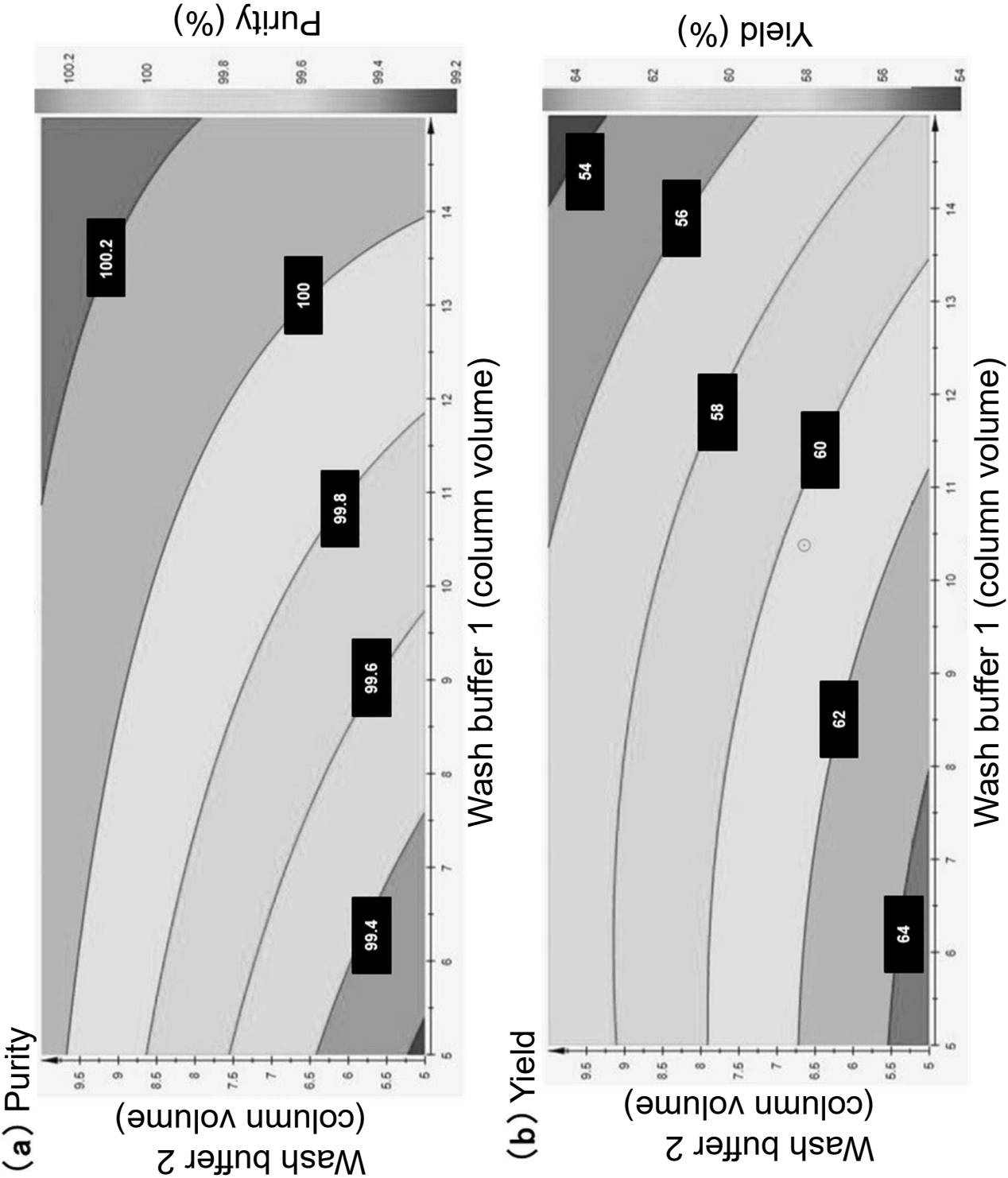


Fig. 7

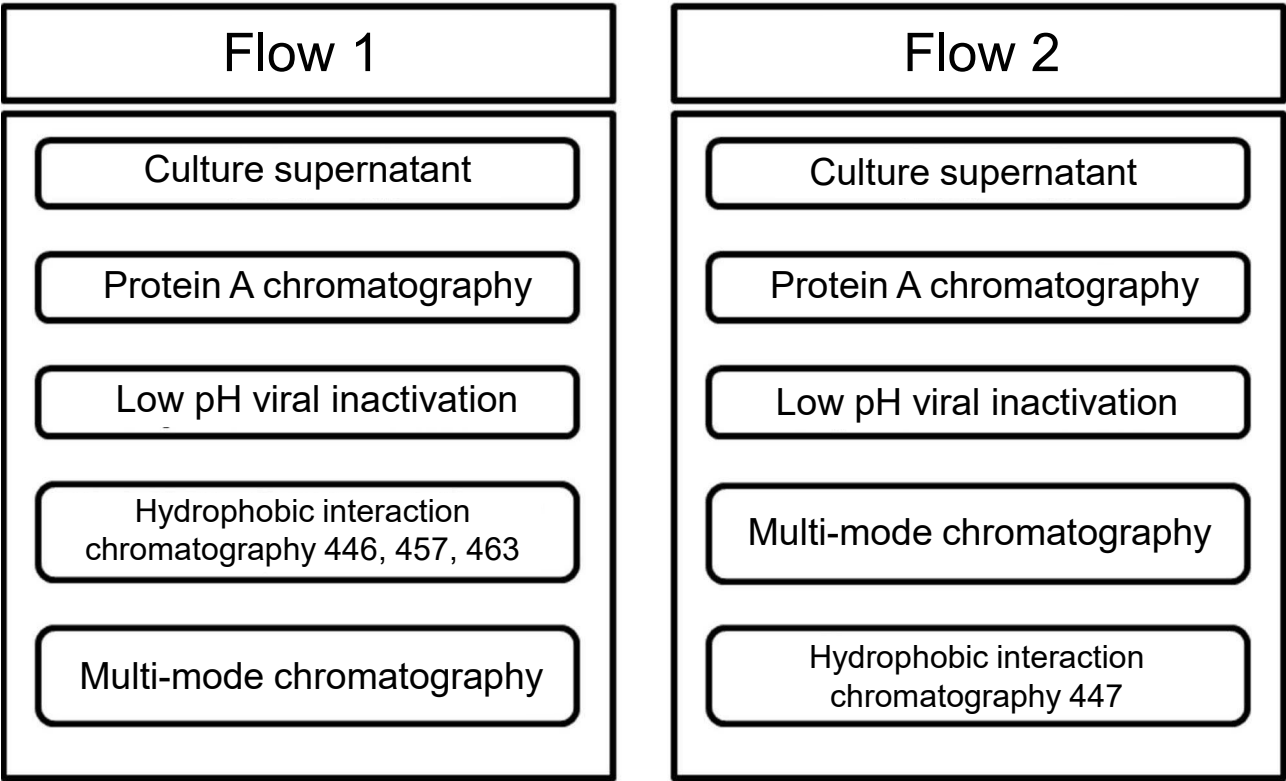


Fig. 8

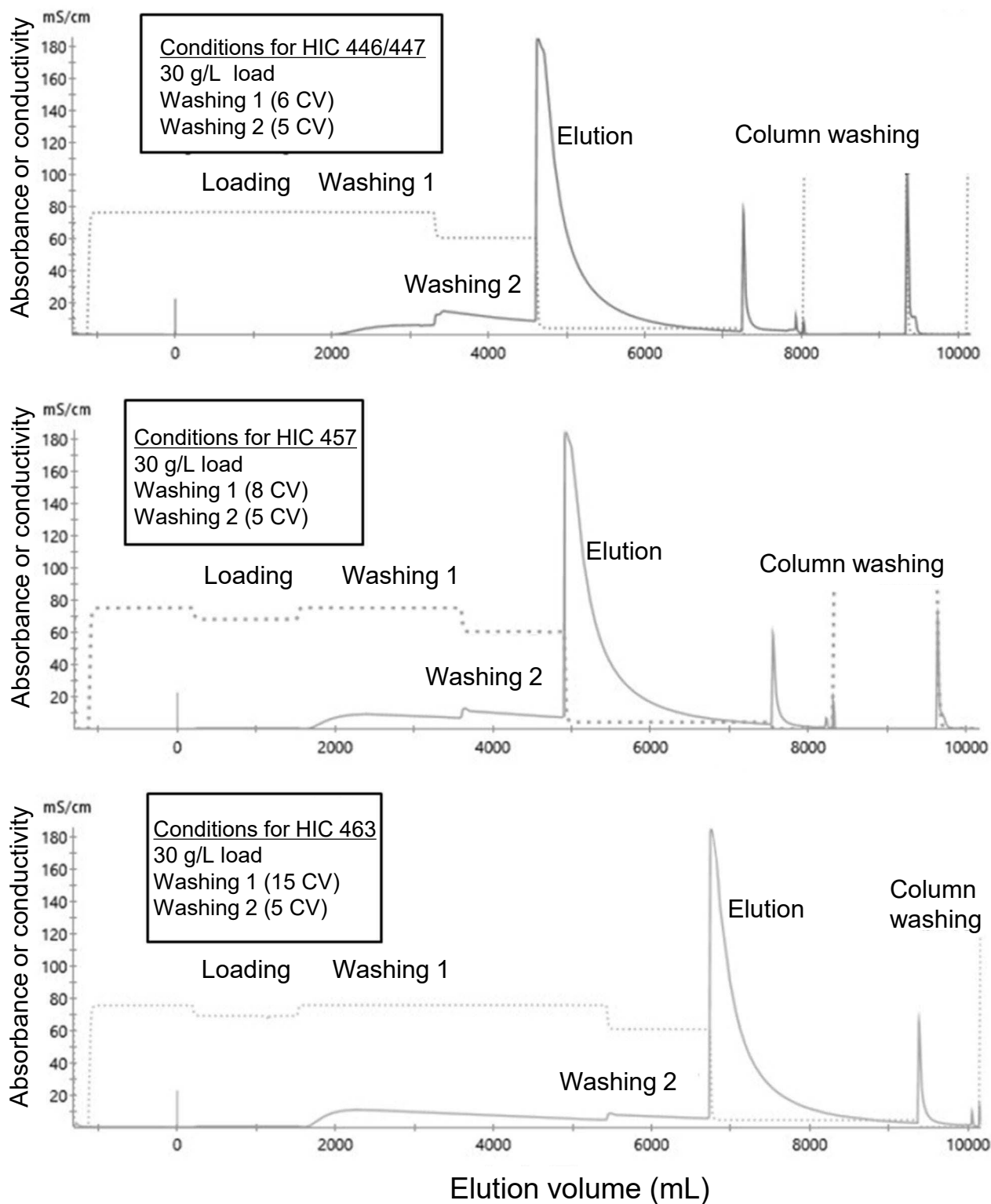


Fig. 9

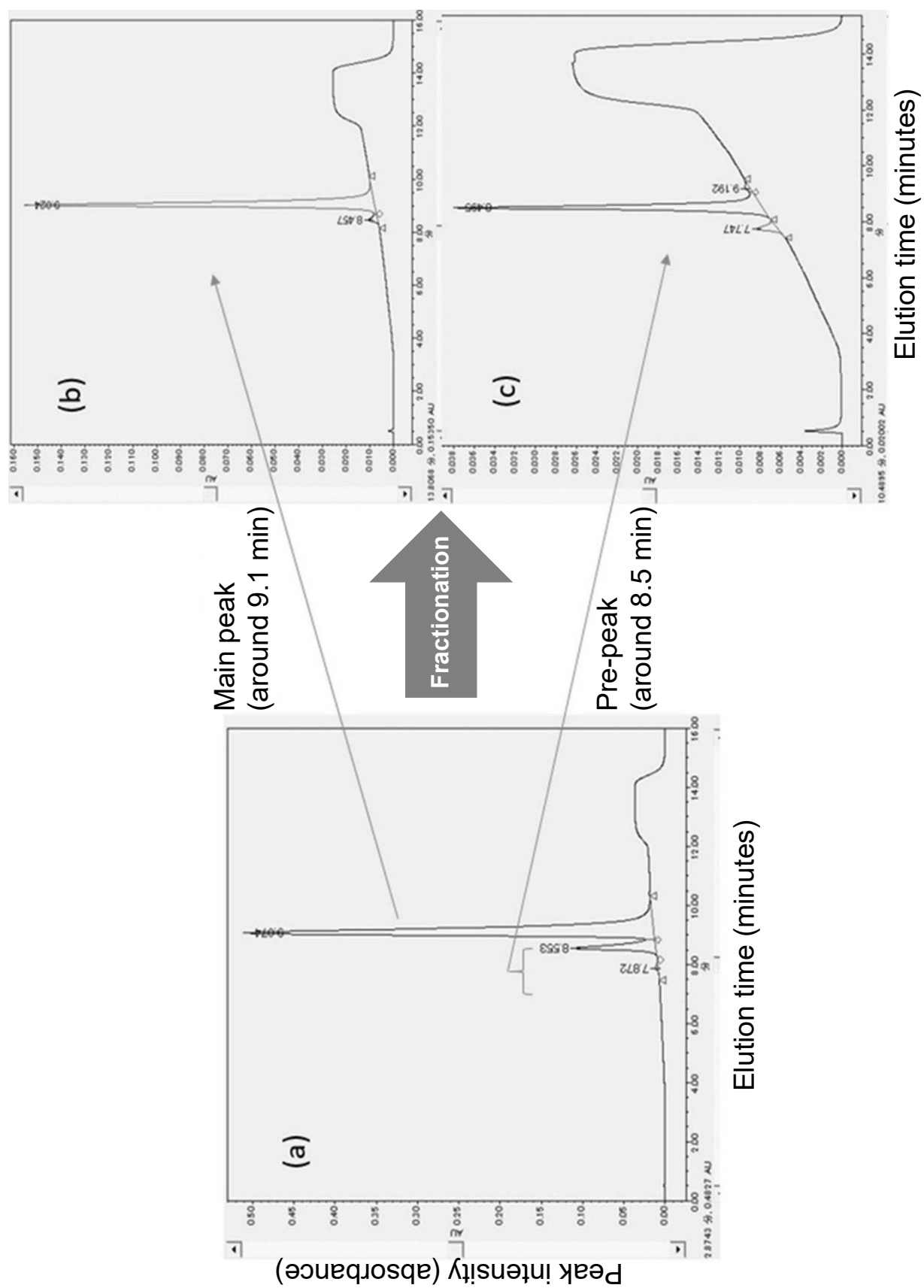


Fig. 10

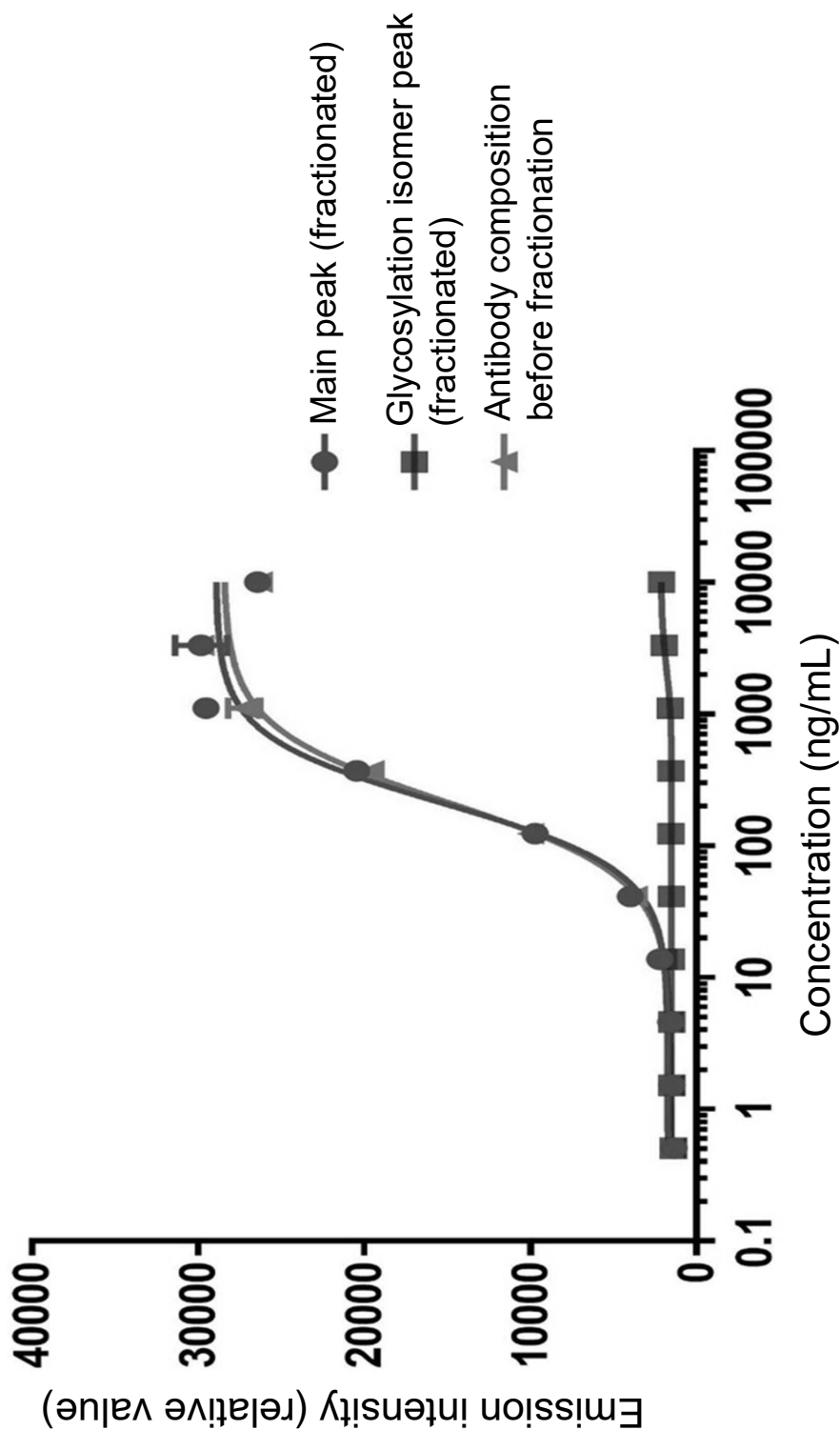


Fig. 11

1 ATGGGTTGGAGCTGTATCATCTTCTTTCTGGTAGCAACAGCTACAGGCGTGCACTCCCAA
 M G W S C I I F F L V A T A T G V H S Q
 61 GTCCAGCTGGTGAGTCTGGGGCTGAAGTGAAGAAGCCTGGGGCCTCAGTGAAAGTCTCC
 V Q L V Q S G A E V K K P G A S V K V S
 121 TGCAAGGCTTCCGGCTACACATTCACTGATTATGCTATGCACTGGGTGCGACAGGCCCTT
 C K A S G Y T F T D Y A M H W V R Q A P
 181 GGACAAGGCTGGAGTGGATTGGAGTTATTAGTACTTACTATGGTAATACAACTACAAC
 G Q G L E W I G V I S T Y Y G N T N Y N
 241 CAGAAGTTTAAGGGCAAGGCCACAATGACTGTGACACATCCACCAGCACAGCCTATATG
 Q K F K G K A T M T V D T S T S T A Y M
 301 GAACCTAGGAGCTTGAGATCTGACGATACTGCCGTGTATTACTGTGCAAGAGGAGGATTG
 E L R S L R S D D T A V Y Y C A R G G L
 361 CGAGAGTATTACTATGCTATGGACTACTGGGGTCAAGGAACCATGGTCACCGTCTCCTCA
 R E Y Y Y A M D Y W G Q G T M V T V S S
 421 GCCTCCACCAAGGGCCCATCGGTCTTCCCCCTGGCACCCCTCCTCCAAGAGCACCTCTGGG
 A S T K G P S V F P L A P S S K S T S G
 481 GGCACAGCGGCCCTGGGCTGCCTGGTCAAGGACTACTTCCCCGAACCGGTGACGGTGTGCG
 G T A A L G C L V K D Y F P E P V T V S
 541 TGGAACCTCAGGCGCCCTGACCAGCGGCGTGACACCTTCCCGGCTGTCTACAGTCTCTCA
 W N S G A L T S G V H T F P A V L Q S S
 601 GGACTCTACTCCCTCAGCAGCGTGGTGACCGTGCCCTCCAGCAGCTTGGGCACCCAGACC
 G L Y S L S S V V T V P S S S L G T Q T
 661 TACATCTGCAACGTGAATCACAAGCCCAGCAACACCAAGGTGGACAAGAAAGTTGAGCCC
 Y I C N V N H K P S N T K V D K K V E P
 721 AAATCTTGTGACAAAACCTCACACATGCCACCGTGCCAGCACCTGAACTCCTGGGGGGA
 K S C D K T H T C P P C P A P E L L G G
 781 CCGTCAGTCTTCTTCTTCCCCCAAAACCCAAGGACACCCTCATGATCTCCCGGACCCCT
 P S V F L F P P K P K D T L M I S R T P
 841 GAGGTCACATGCGTGGTGGTGGACGTGAGCCACGAAGACCCTGAGGTCAAGTTCAACTGG
 E V T C V V V D V S H E D P E V K F N W
 901 TACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAAGCCGCGGGAGGAGCAGTACAAC
 Y V D G V E V H N A K T K P R E E Q Y N
 961 AGCACGTACCGTGTGGTGCAGCGTCTCACCGTCTGCACCAGGACTGGCTGAATGGCAAG
 S T Y R V V S V L T V L H Q D W L N G K
 1021 GAGTACAAGTGCAAGGTCTCCAACAAAGCCCTCCAGCCCCATCGAGAAAACCATCTCC
 E Y K C K V S N K A L P A P I E K T I S
 1081 AAAGCCAAAGGGCAGCCCCGAGAACCACAGGTGTACACCCTGCCCCCATCCCGGGATGAG
 K A K G Q P R E P Q V Y T L P P S R D E
 1141 CTGACCAAGAACCAGGTGACCTGACCTGCCTGGTCAAAGGCTTCTATCCCAGCGACATC
 L T K N Q V S L T C L V K G F Y P S D I
 1201 GCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACAACCTACAAGACCACGCCTCCCGTG
 A V E W E S N G Q P E N N Y K T T P P V
 1261 CTGGACTCCGACGGCTCCTTCTTCTCTACAGCAAGCTCACCGTGGACAAGAGCAGGTGG
 L D S D G S F F L Y S K L T V D K S R W
 1321 CAGCAGGGGAACGTCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCACTACAG
 Q Q G N V F S C S V M H E A L H N H Y T
 1381 CAGAAGAGCCTCTCCCTGTCTCCGGGTAAATGA
 Q K S L S L S P G K •

Fig. 12

1 ATGGGTTGGAGCTGTATCATCTTCTTTCTGGTAGCAACAGCTACAGGCGTGCACTCCCAA
 M G W S C I I F F L V A T A T G V H S Q
 61 GTCCAGCTGGTGCAGTCTGGGGCTGAAGTGAAGAAGCCTGGGGCCTCAGTGAAAGTCTCC
 V Q L V Q S G A E V K K P G A S V K V S
 121 TGCAAGGCTTCCGGCTACACATTCAGTATTATGCTATGCACTGGGTGCGACAGGCCCT
 C K A S G Y T F T D Y A M H W V R Q A P
 181 GGACAAGGCTGGAGTGGATTGGAGTTATTAGTACTTACTATGGTAATACAACTACAAC
 G Q G L E W I G V I S T Y Y G N T N Y N
 241 CAGAAGTTTAAAGGGCCGAGCCACAATGACTGTGACACATCCACCAGCACAGCCTATATG
 Q K F K G R A T M T V D T S T S T A Y M
 301 GAACTTAGGAGCTTGAGATCTGACGATACTGCCGTGTATTACTGTGCAAGAGGAGGATTG
 E L R S L R S D D T A V Y Y C A R G G L
 361 CGAGAGTATTACTATGCTATGGACTACTGGGGTCAAGGAACCATGGTCACCGTCTCCTCA
 R E Y Y Y A M D Y W G Q G T M V T V S S
 421 GCCTCCACCAAGGGCCCATCGGTCTTCCCCCTGGCACCCCTCCTCCAAGAGCACCTCTGGG
 A S T K G P S V F P L A P S S K S T S G
 481 GGCACAGCGGCCCTGGGCTGCCTGGTCAAGGACTACTTCCCCGAACCGGTGACGGTGTGCG
 G T A A L G C L V K D Y F P E P V T V S
 541 TGGAAGTCAAGGCGCCCTGACCAGCGCGTGCACACCTTCCCGGCTGTCTACAGTCCTCA
 W N S G A L T S G V H T F P A V L Q S S
 601 GGACTCTACTCCCTCAGCAGCGTGGTGACCGTGCCTTCCAGCAGCTTGGGGCACCCAGACC
 G L Y S L S S V V T V P S S S L G T Q T
 661 TACATCTGCAACGTGAATCACAAGCCCAGCAACACCAAGGTGGACAAGAAAGTTGAGCCC
 Y I C N V N H K P S N T K V D K K V E P
 721 AAATCTTGTGACAAACTCACACATGCCACCGTGCCAGCACCTGAACTCCTGGGGGGA
 K S C D K T H T C P P C P A P E L L G G
 781 CCGTCAGTCTTCTTCTTCCCCCAAACCAAGGACACCTCATGATCTCCCGGACCCCT
 P S V F L F P P K P K D T L M I S R T P
 841 GAGGTCACATGCGTGGTGGTGGACGTGAGCCACGAAGACCCTGAGGTCAAGTTCAACTGG
 E V T C V V V D V S H E D P E V K F N W
 901 TACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAAGCCGCGGGAGGAGCAGTACAAC
 Y V D G V E V H N A K T K P R E E Q Y N
 961 AGCACGTACCGTGTGGTCAAGCTCCTCACCGTCTGCAACAGGACTGGCTGAATGGCAAG
 S T Y R V V S V L T V L H Q D W L N G K
 1021 GAGTACAAGTGAAGGTCTCCAACAAAGCCCTCCCAGCCCCCATCGAGAAAACCATCTCC
 E Y K C K V S N K A L P A P I E K T I S
 1081 AAAGCCAAAGGGCAGCCCCGAGAACCACAGGTGTACACCCTGCCCCCATCCCGGGATGAG
 K A K G Q P R E P Q V Y T L P P S R D E
 1141 CTGACCAAGAACCAGGTGACCTGACCTGCCTGGTCAAAGGCTTCTATCCCAGCGACATC
 L T K N Q V S L T C L V K G F Y P S D I
 1201 GCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACAACACTACAAGACCACGCTCCCGTG
 A V E W E S N G Q P E N N Y K T T P P V
 1261 CTGGACTCCGACGGCTCCTTCTTCTCTACAGCAAGCTCACCGTGGACAAGAGCAGGTGG
 L D S D G S F F L Y S K L T V D K S R W
 1321 CAGCAGGGGAACGTCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCACTACAG
 Q Q G N V F S C S V M H E A L H N H Y T
 1381 CAGAAGAGCCTCTCCCTGTCTCCGGGTAAATGA
 Q K S L S L S P G K .

Fig. 13

1 ATGGAATCACAGACCCAGGTCCTCATGTTTCTTCTGCTCTGGGTATCTGGTGCCTGTGCA
 M E S Q T Q V L M F L L L W V S G A C A
 61 GACATTGTCATGACACAGTCTCCAGACTCCCTGGCTGTGTCACTGGGAGAGAGGGCCACT
 D I V M T Q S P D S L A V S L G E R A T
 121 ATCAACTGCAAGTCCAGTCAGAGCCTTCTGAATAGTAGCAATCAAAAGAACTATTTGGCC
 I N C K S S Q S L L N S S N Q K N Y L A
 181 TGGTACCAGCAGAAACCAGGACAGCCTCCTAAACTTCTGGTCTACTTTGCATCCACTAGG
 W Y Q Q K P G Q P P K L L V Y F A S T R
 241 GAATCTGGGGTCCCTGATCGCTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTTACC
 E S G V P D R F S G S G S G T D F T L T
 301 ATCAGCAGTCTGCAGGCTGAAGATGTGGCAGTTTACTACTGTTCAGCAACATTATAGCACT
 I S S L Q A E D V A V Y Y C Q Q H Y S T
 361 CCTCCACATTTCGGTCAGGGGACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCT
 P P T F G Q G T K L E I K R T V A A P S
 421 GTCTTCATCTTCCCGCCATCTGATGAGCAGTTGAAATCTGGAAGTGCCTCTGTTGTGTGC
 V F I F P P S D E Q L K S G T A S V V C
 481 CTGCTGAATAACTTCTATCCCAGAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTC
 L L N N F Y P R E A K V Q W K V D N A L
 541 CAATCGGGTAACTCCCAGGAGAGTGTACAGAGCAGGACAGCAAGGACAGCACCTACAGC
 Q S G N S Q E S V T E Q D S K D S T Y S
 601 CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAGTCTACGCCTGC
 L S S T L T L S K A D Y E K H K V Y A C
 661 GAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAAGAGCTTCAACAGGGGAGAGTGT
 E V T H Q G L S S P V T K S F N R G E C
 721 TAG

.

Fig. 14

1 ATGGGTTGGAGCTGTATCATCTTCTTTCTGGTAGCAACAGCTACAGGCGTGCACTCCCAA
 M G W S C I I F F L V A T A T G V H S Q
 61 GTCCAGCTGGTGCAGTCTGGGGCTGAAGTGAAGAAGCCTGGGGCCTCAGTGAAAGTCTCC
 V Q L V Q S G A E V K K P G A S V K V S
 121 TGCAAGGCTTCCGGCTACACATTCAGTATTATGCTATGCACTGGGTGCGACAGGCCCTT
 C K A S G Y T F T D Y A M H W V R Q A P
 181 GGACAAGGCTGGAGTGGATTGGAGTTATTAGTACTTACTATGGTAATACAACTACAAC
 G Q G L E W I G V I S T Y Y G N T N Y N
 241 CAGAAGTTTAAGGGCAAGGCCACAATGACTGTGACAAATCCACCAGCACAGCCTATATG
 Q K F K G K A T M T V D K S T S T A Y M
 301 GAACTTAGGAGCTTGAGATCTGACGATACTGCCGTGTATTACTGTGCAAGAGGAGGATTG
 E L R S L R S D D T A V Y Y C A R G G L
 361 CGAGAGTATTACTATGCTATGGACTACTGGGGTCAAGGAACCATGGTCACCGTCTCCTCA
 R E Y Y Y A M D Y W G Q G T M V T V S S
 421 GCCTCCACCAAGGGCCCATCGGTCTTCCCCCTGGCACCCCTCCTCCAAGAGCACCTCTGGG
 A S T K G P S V F P L A P S S K S T S G
 481 GGCACAGCGGCCCTGGGCTGCCTGGTCAAGGACTACTTCCCCGAACCGGTGACGGTGTGCG
 G T A A L G C L V K D Y F P E P V T V S
 541 TGGAACTCAGGCGCCCTGACCAGCGGCGTGACACCTTCCCGGCTGTCTACAGTCCTCA
 W N S G A L T S G V H T F P A V L Q S S
 601 GGACTCTACTCCCTCAGCAGCGTGGTGACCGTGCCCTCCAGCAGCTTGGGCACCCAGACC
 G L Y S L S S V V T V P S S S L G T Q T
 661 TACATCTGCAACGTGAATCACAAGCCCAGCAACACCAAGGTGGACAAGAAAGTTGAGCCC
 Y I C N V N H K P S N T K V D K K V E P
 721 AAATCTTGTGACAAACTCACACATGCCACCGTGCCAGCACCTGAACTCCTGGGGGGA
 K S C D K T H T C P P C P A P E L L G G
 781 CCGTCAGTCTTCTTCTTCCCCCAAAACCAAGGACACCCTCATGATCTCCCGGACCCCT
 P S V F L F P P K P K D T L M I S R T P
 841 GAGGTCACATGCGTGGTGGTGGACGTGAGCCACGAAGACCCTGAGGTCAAGTTCAACTGG
 E V T C V V V D V S H E D P E V K F N W
 901 TACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAAGCCGCGGGAGGAGCAGTACAAC
 Y V D G V E V H N A K T K P R E E Q Y N
 961 AGCACGTACCGTGTGGTGCAGCGTCTCACCCTGCTGACCCAGGACTGGCTGAATGGCAAG
 S T Y R V V S V L T V L H Q D W L N G K
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 E Y K C K V S N K A L P A P I E K T I S
 1081 AAAGCCAAAGGGCAGCCCCGAGAACCACAGGTGTACACCCTGCCCCCATCCCGGGATGAG
 K A K G Q P R E P Q V Y T L P P S R D E
 1141 CTGACCAAGAACCAGGTGACCTGACCTGGTCAAAGGCTTCTATCCCAGCGACATC
 L T K N Q V S L T C L V K G F Y P S D I
 1201 GCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAACAACACTACAAGACCACGCCTCCCGTG
 A V E W E S N G Q P E N N Y K T T P P V
 1261 CTGGACTCCGACGGCTCCTTCTTCTCTACAGCAAGCTCACCCTGGACAAGAGCAGGTGG
 L D S D G S F F L Y S K L T V D K S R W
 1321 CAGCAGGGGAACGTCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCACTACAG
 Q Q G N V F S C S V M H E A L H N H Y T
 1381 CAGAAGAGCCTCTCCCTGTCTCCGGGTAAATGA
 Q K S L S L S P G K •

Fig. 15

1 ATGGGTTGGAGCTGTATCATCTTCTTTCTGGTAGCAACAGCTACAGGCGTGCACTCCCAA
 M G W S C I I F F L V A T A T G V H S Q
 61 GTCCAGCTGGTGCAGTCTGGGGCTGAAGTGAAGAAGCCTGGGGCCTCAGTGAAAGTCTCC
 V Q L V Q S G A E V K K P G A S V K V S
 121 TGCAAGGGTTCCGGCTACACATTCAGTATTATGCTATGCACTGGGTGCGACAGGCCCCCT
 C K G S G Y T F T D Y A M H W V R Q A P
 181 GGACAAGGCCTGGAGTGGATTGGAGTTATTAGTACTTACTATGGTAATACAACTACAAC
 G Q G L E W I G V I S T Y Y G N T N Y N
 241 CAGAAGTTTAAGGGCAAGGCCACAATGACTGTGACAAATCCACCAGCACAGCCTATATG
 Q K F K G K A T M T V D K S T S T A Y M
 301 GAACTTAGGAGCTTGAGATCTGACGATACTGCCGTGTATTACTGTGCAAGAGGAGGATTG
 E L R S L R S D D T A V Y Y C A R G G L
 361 CGAGAGTATTACTATGCTATGGACTACTGGGGTCAAGGAACCATGGTCACCGTCTCCTCA
 R E Y Y Y A M D Y W G Q G T M V T V S S
 421 GCCTCCACCAAGGGCCCATCGGTCTTCCCCCTGGCACCCCTCCTCCAAGAGCACCTCTGGG
 A S T K G P S V F P L A P S S K S T S G
 481 GGCACAGCGGCCCTGGGCTGCCTGGTCAAGGACTACTTCCCCGAACCGGTGACGGTGTGCG
 G T A A L G C L V K D Y F P E P V T V S
 541 TGGAACTCAGGCGCCCTGACCAGCGGCGTGACACCTTCCGGCTGTCTACAGTCCTCA
 W N S G A L T S G V H T F P A V L Q S S
 601 GGACTCTACTCCCTCAGCAGCGTGGTGACCGTGCCCTCCAGCAGCTTGGGCACCCAGACC
 G L Y S L S S V V T V P S S S L G T Q T
 661 TACATCTGCAACGTGAATCACAAGCCCAGCAACACCAAGGTGGACAAGAAAGTTGAGCCC
 Y I C N V N H K P S N T K V D K K V E P
 721 AAATCTTGTGACAAACTCACACATGCCACCGTGCCAGCACCTGAACTCCTGGGGGGA
 K S C D K T H T C P P C P A P E L L G G
 781 CCGTCAGTCTTCTCTTCCCCCAAAACCCAAGGACACCCTCATGATCTCCCGGACCCCT
 P S V F L F P P K P K D T L M I S R T P
 841 GAGGTCACATGCGTGGTGGTGGACGTGAGCCACGAAGACCCTGAGGTCAAGTTCAACTGG
 E V T C V V V D V S H E D P E V K F N W
 901 TACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAAGCCGCGGGAGGAGCAGTACAAC
 Y V D G V E V H N A K T K P R E E Q Y N
 961 AGCACGTACCGTGTGGTCAGCGTCTCACCCTGTCACCCAGGACTGGCTGAATGGCAAG
 S T Y R V V S V L T V L H Q D W L N G K
 1021 GAGTACAAGTGCAAGGTCTCCAACAAAGCCCTCCAGCCCCCATCGAGAAAACCATCTCC
 E Y K C K V S N K A L P A P I E K T I S
 1081 AAAGCCAAAGGGCAGCCCCGAGAACCACAGGTGTACACCCTGCCCCCATCCCGGGATGAG
 K A K G Q P R E P Q V Y T L P P S R D E
 1141 CTGACCAAGAACCAGGTCAGCCTGACCTGCCTGGTCAAAGGCTTCTATCCCAGCGACATC
 L T K N Q V S L T C L V K G F Y P S D I
 1201 GCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACAACACTACAAGACCACGCCTCCCGTG
 A V E W E S N G Q P E N N Y K T T P P V
 1261 CTGGACTCCGACGGCTCCTTCTTCTCTACAGCAAGCTCACCGTGGACAAGAGCAGGTGG
 L D S D G S F F L Y S K L T V D K S R W
 1321 CAGCAGGGGAACGTCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCACTACAG
 Q Q G N V F S C S V M H E A L H N H Y T
 1381 CAGAAGAGCCTCTCCCTGTCTCCGGGTAAATGA
 Q K S L S L S P G K .

17/17

	10	20	30	40	50	60
HuBA-1-3D-VH1 (4)						
HuBA-1-3D-VH1 A24G (16)						
HuBA-1-3D-VH1 T73K (20)						
HuBA-1-3D-VH1 A24G/T73K (24)						
HuBA-1-3D-VH2 (8)						
HuBA-1-3D-VH2 A24G (28)						
HuBA-1-3D-VH2 T73K (32)						
HuBA-1-3D-VH2 A24G/T73K (36)						

	70	80	90	100	110	120
HuBA-1-3D-VH1 (4)						
HuBA-1-3D-VH1 A24G (16)						
HuBA-1-3D-VH1 T73K (20)						
HuBA-1-3D-VH1 A24G/T73K (24)						
HuBA-1-3D-VH2 (8)						
HuBA-1-3D-VH2 A24G (28)						
HuBA-1-3D-VH2 T73K (32)						
HuBA-1-3D-VH2 A24G/T73K (36)						