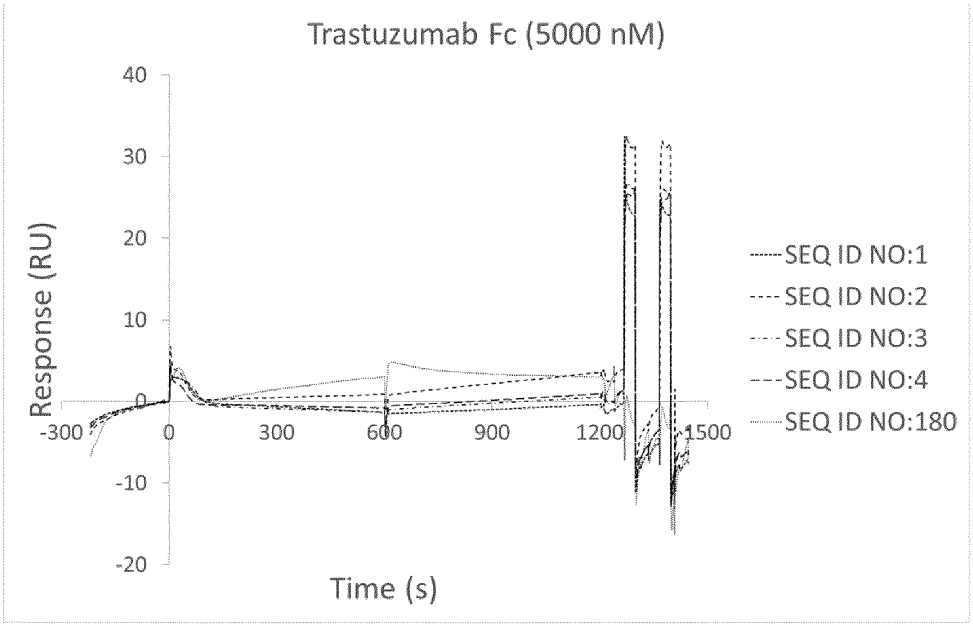
Fig. 1A


Trastuzumab Fc (5000 nM)
Response (RU)
Time (s)
SEQ ID NO:1
SEQ ID NO:2
SEQ ID NO:3
SEQ ID NO:4
SEQ ID NO:180

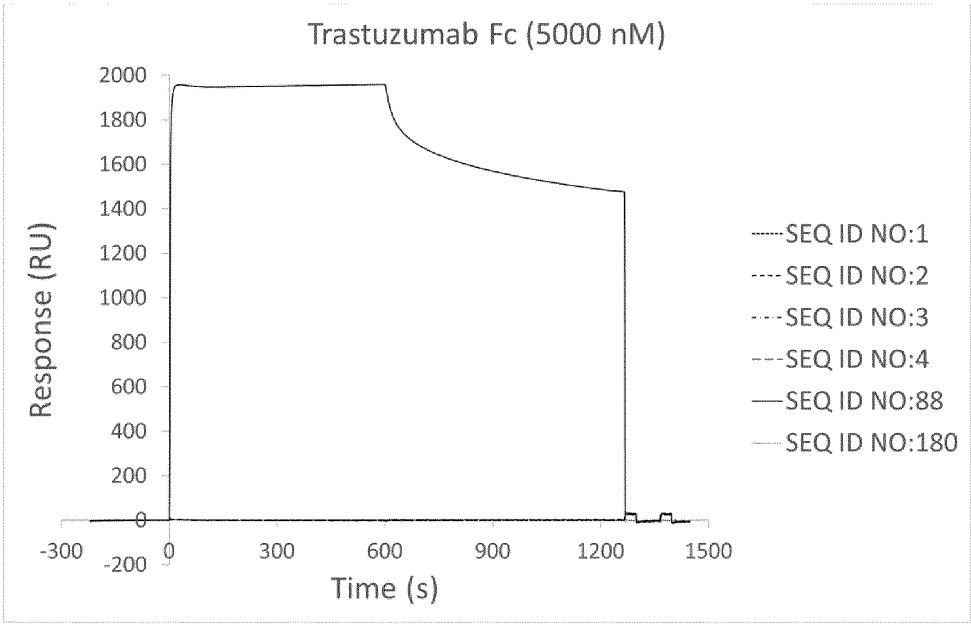

Trastuzumab Fc (5000 nM)
Response (RU)
Time (s)
SEQ ID NO:1
SEQ ID NO:2
SEQ ID NO:3
SEQ ID NO:4
SEQ ID NO:88
SEQ ID NO:180

Fig. 1B

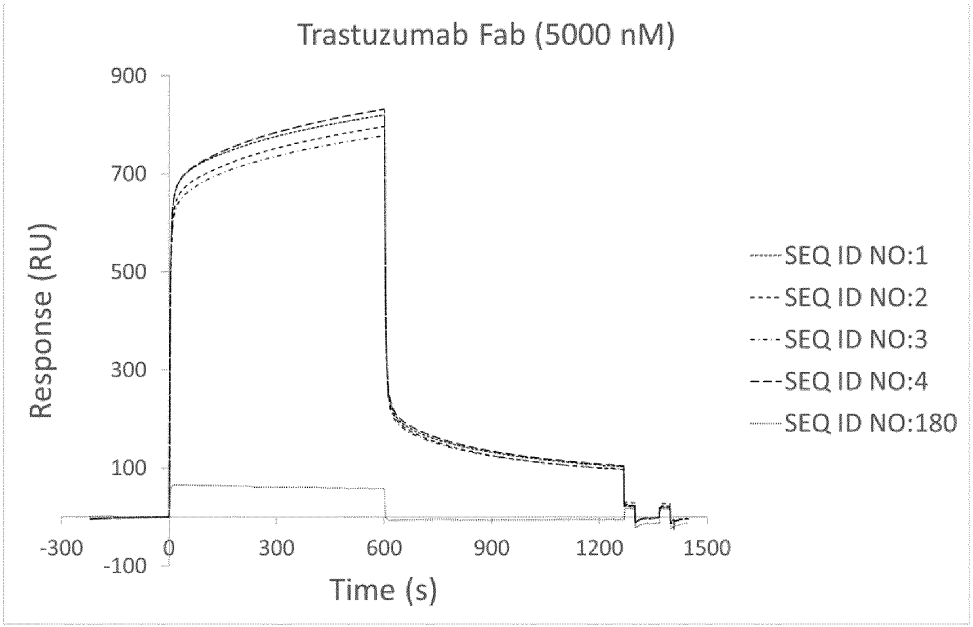

Trastuzumab Fab (5000 nM)
Response (RU)
900
700
500
300
100
-100
-300
0
300
600
900
1200
1500
Time (s)
SEQ ID NO:1
SEQ ID NO:2
SEQ ID NO:3
SEQ ID NO:4
SEQ ID NO:180

Fig. 1C

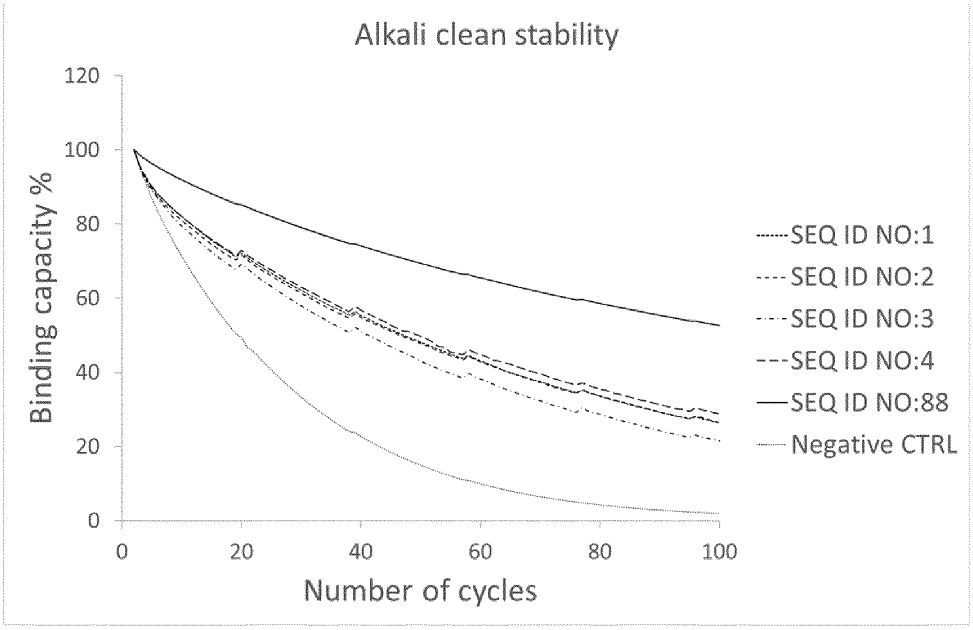
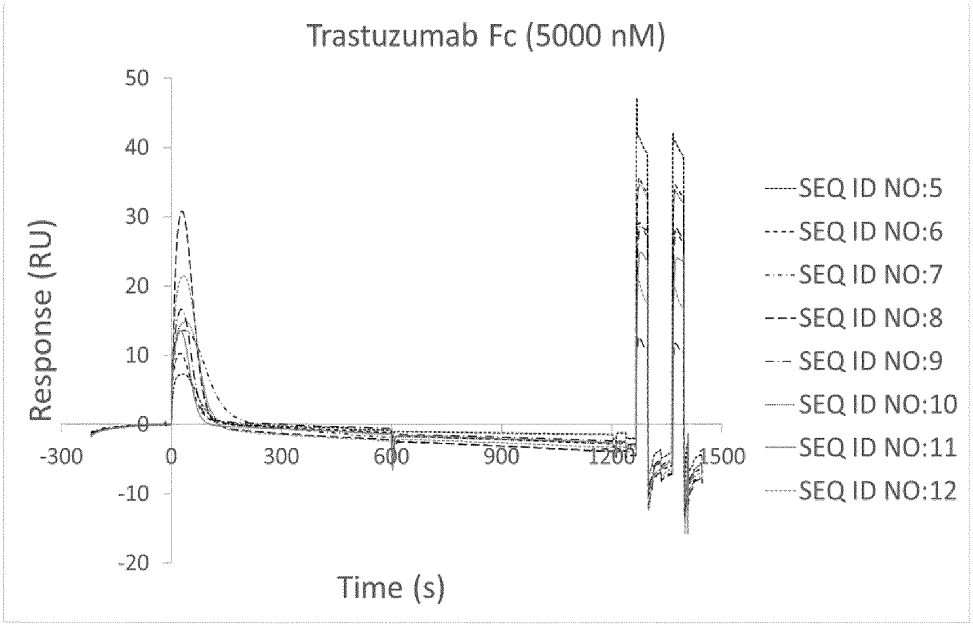

Alkali clean stability
Binding capacity %
120
100
80
60
40
20
0
0
20
40
60
80
100
Number of cycles
SEQ ID NO:1
SEQ ID NO:2
SEQ ID NO:3
SEQ ID NO:4
SEQ ID NO:88
Negative CTRL

Fig. 2A


Trastuzumab Fc (5000 nM)
Response (RU)
50
40
30
20
10
0
-10
-20
-300
0
300
600
900
1200
1500
Time (s)
SEQ ID NO:5
SEQ ID NO:6
SEQ ID NO:7
SEQ ID NO:8
SEQ ID NO:9
SEQ ID NO:10
SEQ ID NO:11
SEQ ID NO:12

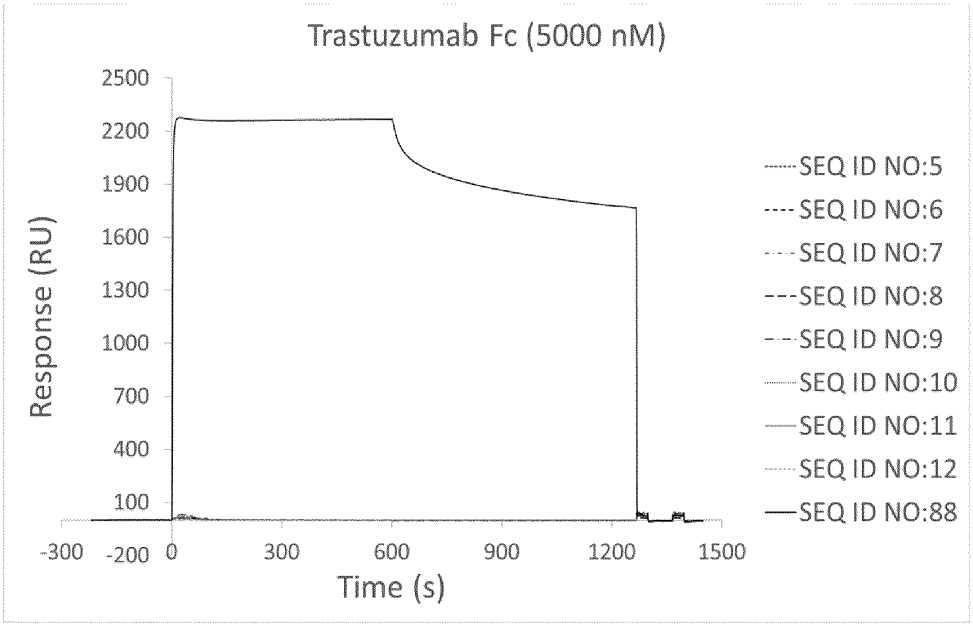
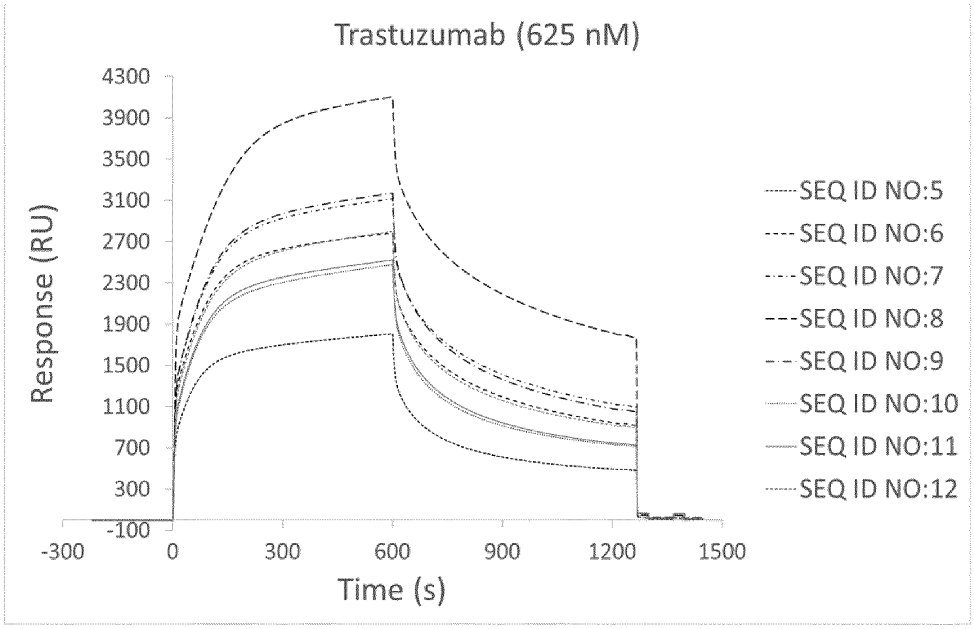

Trastuzumab Fc (5000 nM)
Response (RU)
2500
2200
1900
1600
1300
1000
700
400
100
-300
-200
0
300
600
900
1200
1500
Time (s)
SEQ ID NO:5
SEQ ID NO:6
SEQ ID NO:7
SEQ ID NO:8
SEQ ID NO:9
SEQ ID NO:10
SEQ ID NO:11
SEQ ID NO:12
SEQ ID NO:88

Fig. 2B


Trastuzumab (625 nM)
Response (RU)
4300
3900
3500
3100
2700
2300
1900
1500
1100
700
300
-100
-300
0
300
600
900
1200
1500
Time (s)
SEQ ID NO:5
SEQ ID NO:6
SEQ ID NO:7
SEQ ID NO:8
SEQ ID NO:9
SEQ ID NO:10
SEQ ID NO:11
SEQ ID NO:12

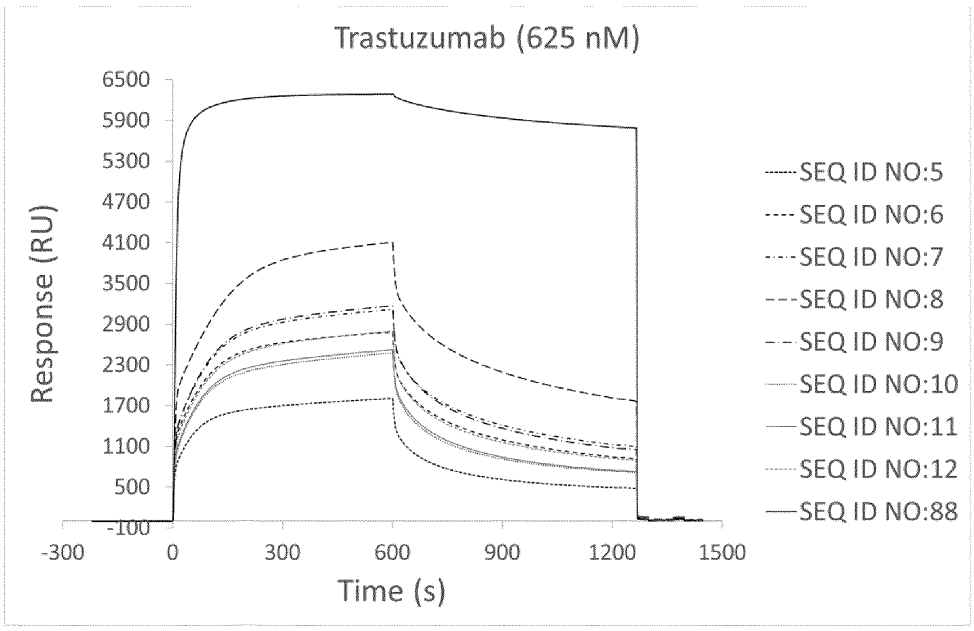

Trastuzumab (625 nM)
Response (RU)
6500
5900
5300
4700
4100
3500
2900
2300
1700
1100
500
-100
-300
0
300
600
900
1200
1500
Time (s)
SEQ ID NO:5
SEQ ID NO:6
SEQ ID NO:7
SEQ ID NO:8
SEQ ID NO:9
SEQ ID NO:10
SEQ ID NO:11
SEQ ID NO:12
SEQ ID NO:88

Fig. 2C

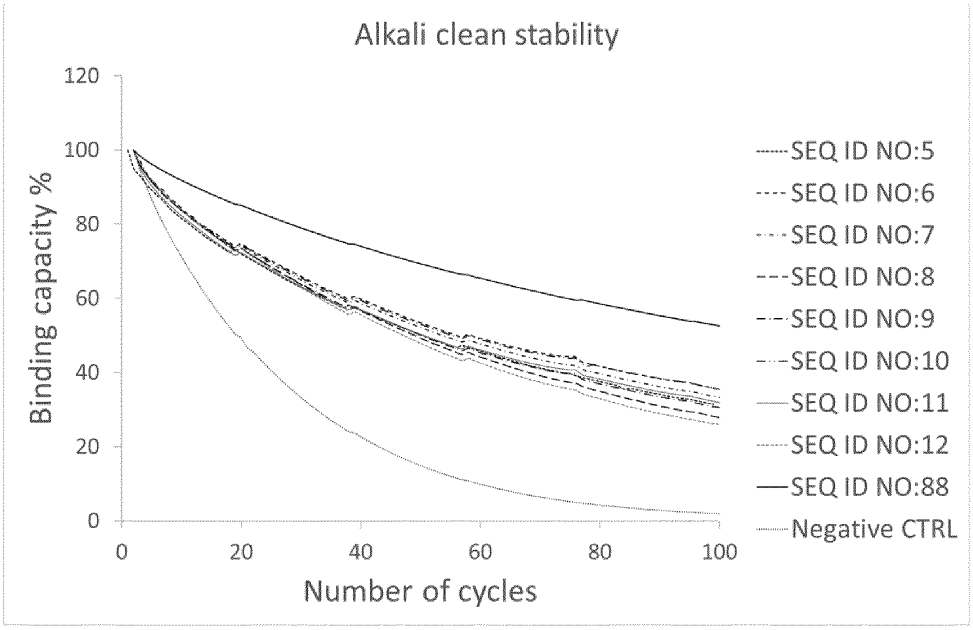
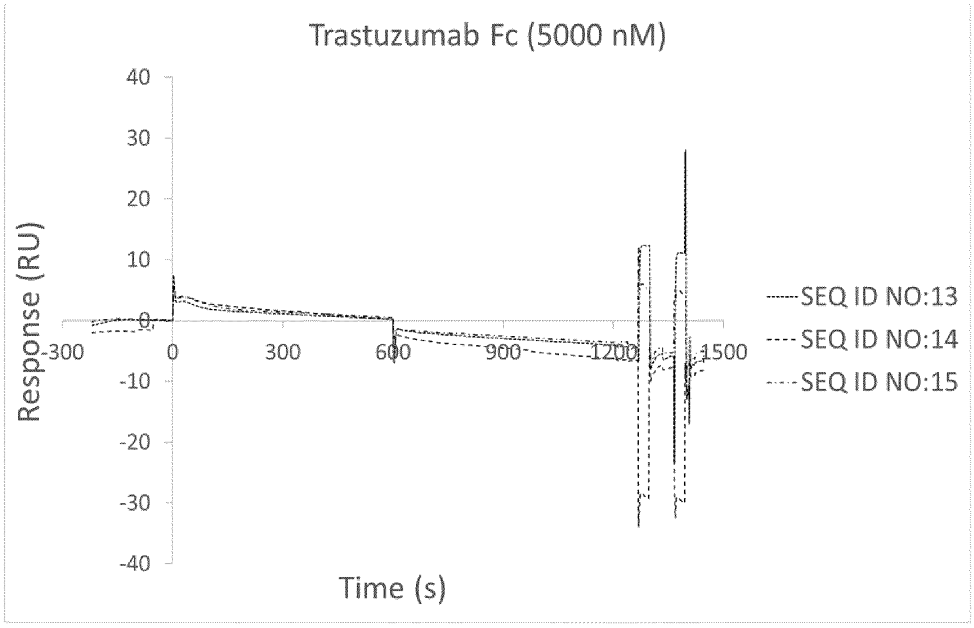

Alkali clean stability
Binding capacity %
120
100
80
60
40
20
0
0
20
40
60
80
100
Number of cycles
SEQ ID NO:5
SEQ ID NO:6
SEQ ID NO:7
SEQ ID NO:8
SEQ ID NO:9
SEQ ID NO:10
SEQ ID NO:11
SEQ ID NO:12
SEQ ID NO:88
Negative CTRL

Fig. 3A


Trastuzumab Fc (5000 nM)
Response (RU)
40
30
20
10
0
-10
-20
-30
-40
-300
0
300
600
900
1200
1500
Time (s)
SEQ ID NO:13
SEQ ID NO:14
SEQ ID NO:15

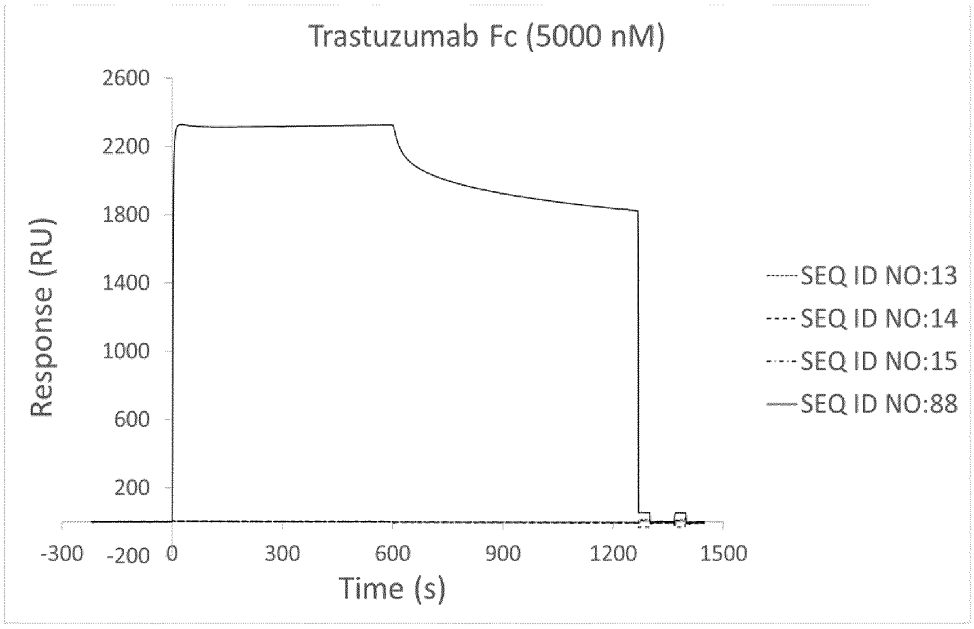

Trastuzumab Fc (5000 nM)
Response (RU)
2600
2200
1800
1400
1000
600
200
-300
-200
0
300
600
900
1200
1500
Time (s)
SEQ ID NO:13
SEQ ID NO:14
SEQ ID NO:15
SEQ ID NO:88

Fig. 3B

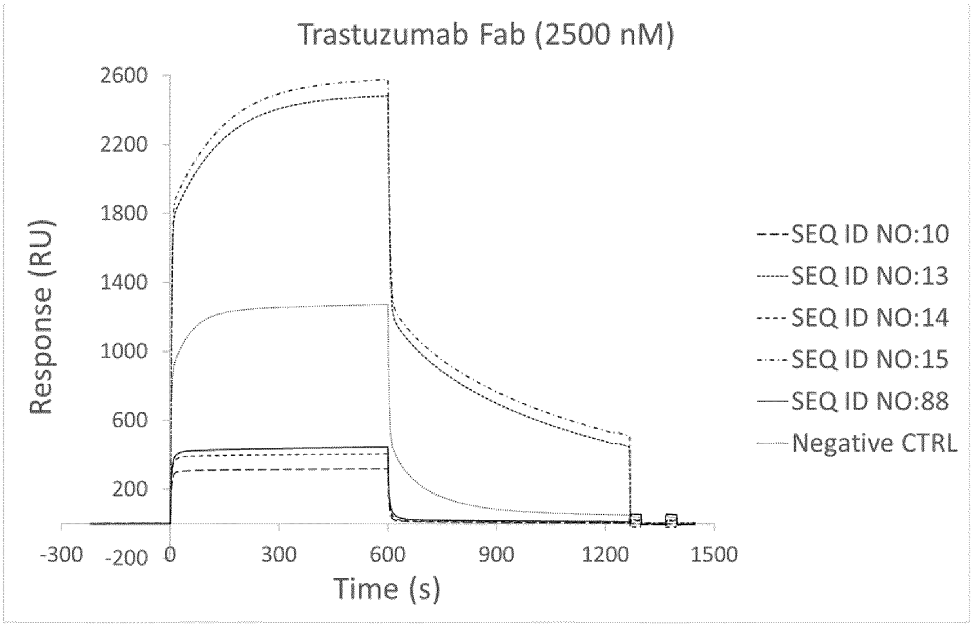

Trastuzumab Fab (2500 nM)
Response (RU)
2600
2200
1800
1400
1000
600
200
-300
-200
0
300
600
900
1200
1500
Time (s)
SEQ ID NO:10
SEQ ID NO:13
SEQ ID NO:14
SEQ ID NO:15
SEQ ID NO:88
Negative CTRL

Fig. 3C

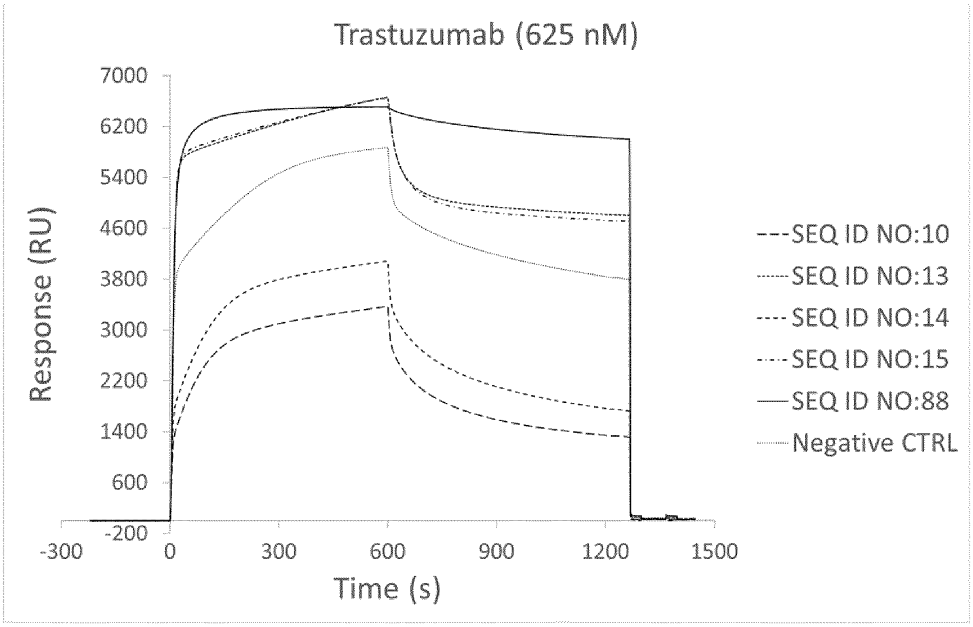

Trastuzumab (625 nM)
Response (RU)
7000
6200
5400
4600
3800
3000
2200
1400
600
-200
-300
0
300
600
900
1200
1500
Time (s)
SEQ ID NO:10
SEQ ID NO:13
SEQ ID NO:14
SEQ ID NO:15
SEQ ID NO:88
Negative CTRL

Fig. 3D

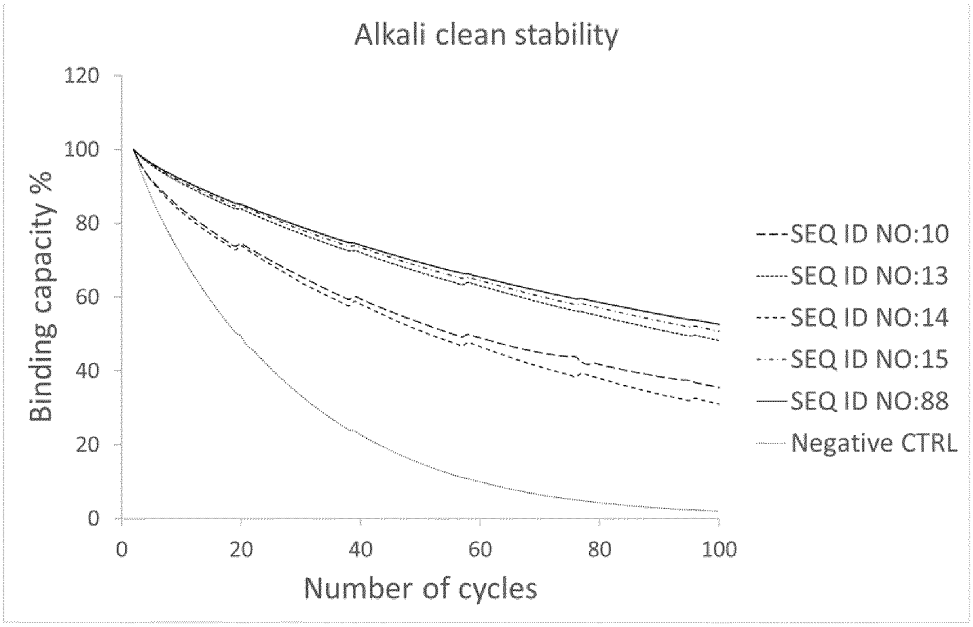

Alkali clean stability
Binding capacity %
120
100
80
60
40
20
0
0
20
40
60
80
100
Number of cycles
SEQ ID NO:10
SEQ ID NO:13
SEQ ID NO:14
SEQ ID NO:15
SEQ ID NO:88
Negative CTRL

Fig. 4A

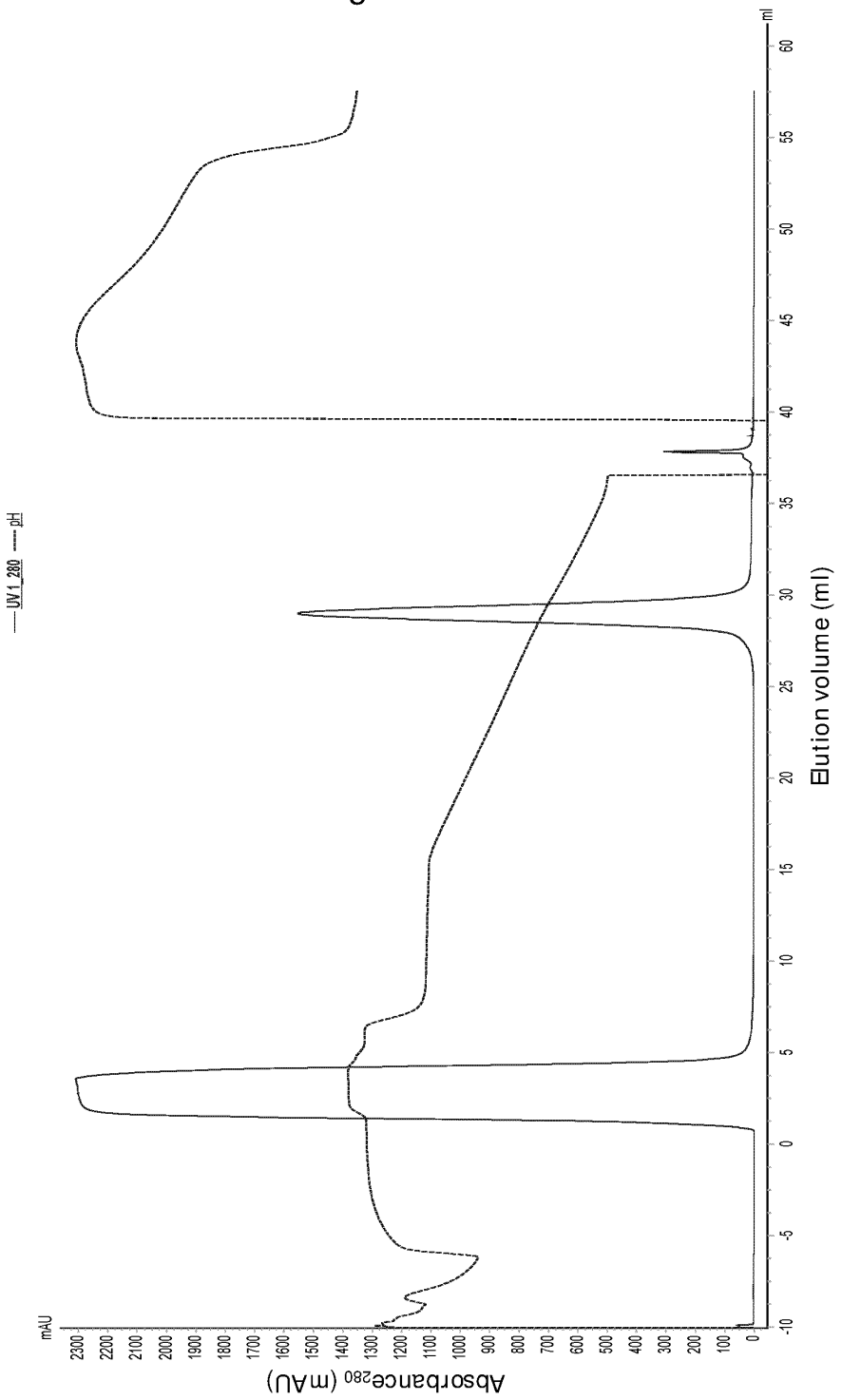

UV1_280
pH
mAU
2300
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
Absorbance280 (mAU)
ml
-10
-5
0
5
10
15
20
25
30
35
40
45
50
55
60
Elution volume (ml)

Fig. 4B

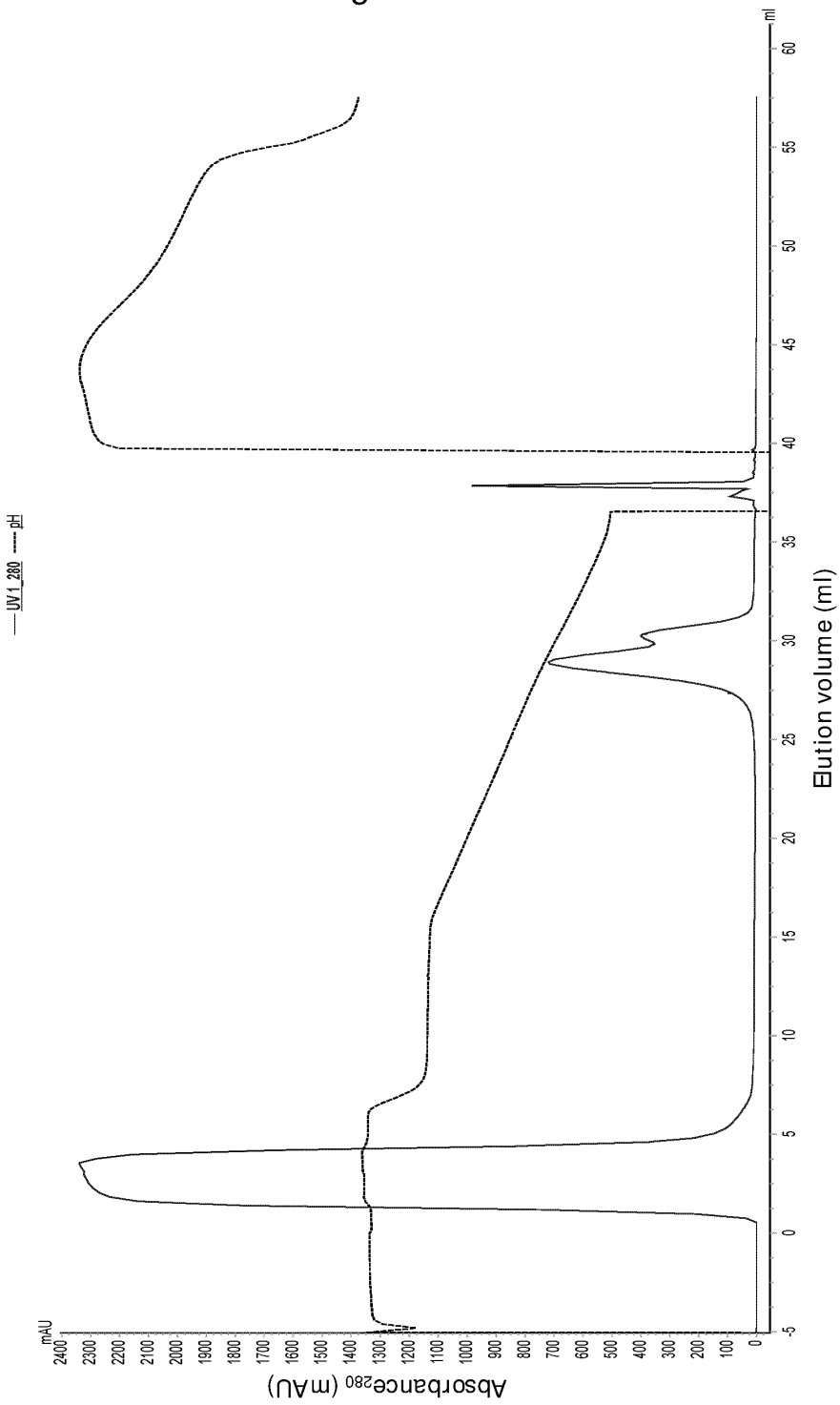

UV 1_280
pH
mAU
2400
2300
2200
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
Absorbance280 (mAU)
ml
-5
0
5
10
15
20
25
30
35
40
45
50
55
60
Elution volume (ml)

Fig. 4C

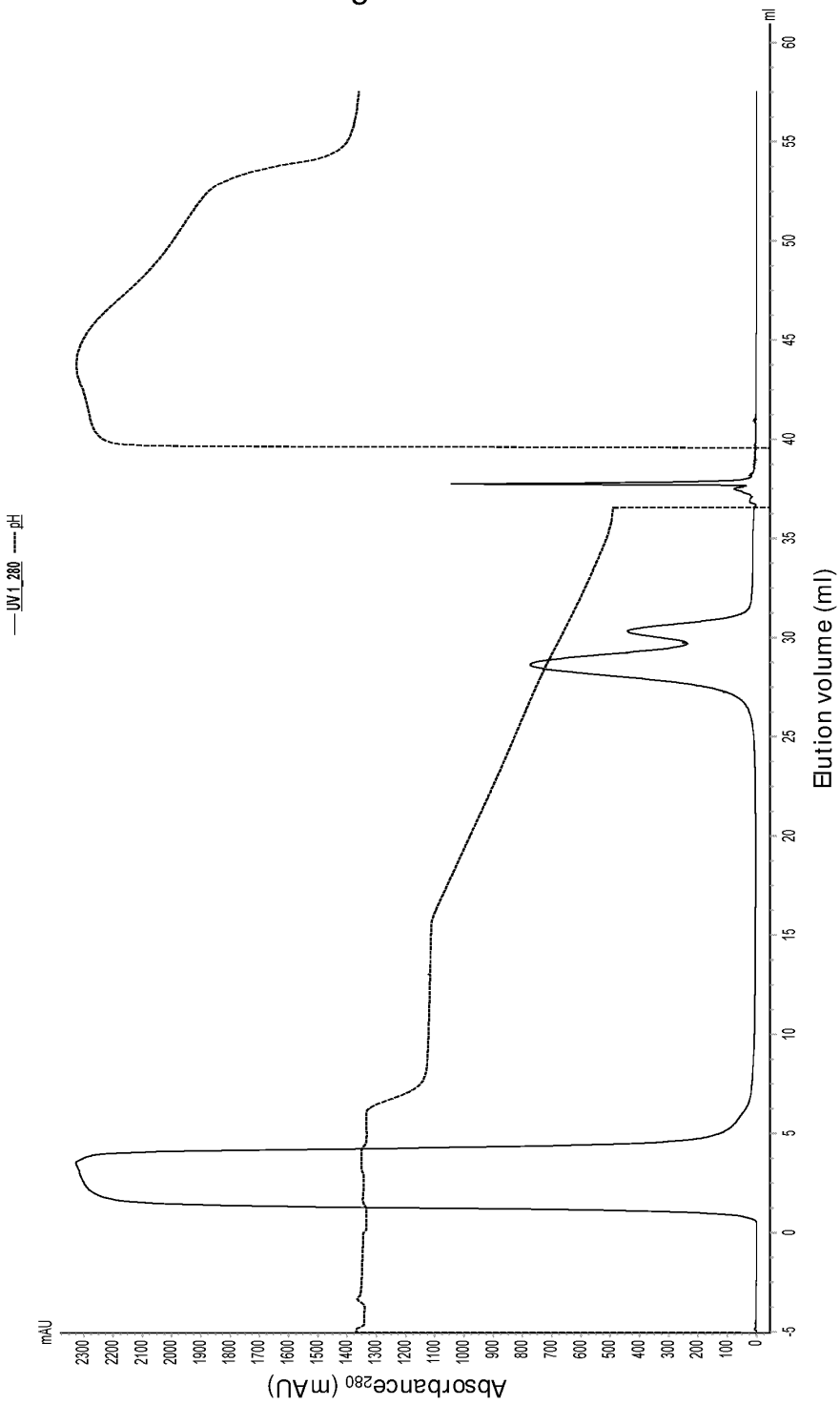


Fig. 5A

Denotation	SEQ ID NO:	Amino acid sequence
Fr1	1	VDAKFDKEQQTALAEILHLPNLTEEQRNAFIQSLKDDPSVSKAILAEAKLNDAQAPK
Fr2	2	VDAKFDKEQYTALAEILHLPNLTEEQRNAFIQSLKDDPSVSKAILAEAKLNDAQAPK
Fr3	3	VDAKFDKEYQTALAEILHLPNLTEEQRNAFIQSLKDDPSVSKAILAEAKLNDAQAPK
Fr4	4	VDAKFDKEQQTALAEIARLPNLTEEQRNAFIQSLKDDPSVSKAILAEAKLNDAQAPK
Fr7	5	VDAKFDKEAQEALAEILHLPNLTEEQRNAFIQSLKDDPSVSKAILAEAKLNDAQAPK
Fr8	6	VDAKFDKEAQRALAEILHLPNLTEEQRNAFIQSLKDDPSVSKAILAEAKLNDAQAPK
Fr9	7	VDAKFDKEAYRALAEILHLPNLTEEQRNAFIQSLKDDPSVSKAILAEAKLNDAQAPK
Fr10	8	VDAKFDKEAYRALWEILHLPNLTEEQRNAFIQSLKDDPSVSKAILAEAKLNDAQAPK
Fr11	9	VDAKFDKEAYRALWEIARLPNLTEEQRNAFIQSLKDDPSVSKAILAEAKLNDAQAPK
Fr12	10	VDAKFDKEAYRALAEIARLPNLTEEQRNAFIQSLKDDPSVSKAILAEAKLNDAQAPK
Fr13	11	VDAKFDKEAYRALAEIHLLPNLTEEQRNAFIQSLKDDPSVSKAILAEAKLNDAQAPK
Fr14	12	VDAKFDKEAYRALWEIHLLPNLTEEQRNAFIQSLKDDPSVSKAILAEAKLNDAQAPK
Fr31	13	VDAKFDKEAYRALAEIARLPNLTEEQRNGFIQSLKDDPSVSKAILAEAKLNDAQAPK
Fr32	14	VDAKFDKEAYRALAEIARLPNLTEEQRAAFIQSLKDDPSVSKAILAEAKLNDAQAPK
Fr33	15	VDAKFDKEAYRALAEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
1Fr33_AA	16	VDAKFDKEAYRAAAEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
2Fr33_AE	17	VDAKFDKEAYRAAEEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
3Fr33_AL	18	VDAKFDKEAYRAALEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
4Fr33_AQ	19	VDAKFDKEAYRAAQEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
5Fr33_AR	20	VDAKFDKEAYRAAREIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
6Fr33_EA	21	VDAKFDKEAYRAEAEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
7Fr33_EE	22	VDAKFDKEAYRAEEEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
8Fr33_EL	23	VDAKFDKEAYRAELEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
9Fr33_EQ	24	VDAKFDKEAYRAEQEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
10Fr33_ER	25	VDAKFDKEAYRAEREIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
11Fr33_LA	26	VDAKFDKEAYRALACIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
12Fr33_LC	27	VDAKFDKEAYRALCEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
13Fr33_LL	28	VDAKFDKEAYRALLEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
14Fr33_LQ	29	VDAKFDKEAYRALQEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
15Fr33_LR	30	VDAKFDKEAYRALREIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK

Fig. 5B

Denotation	SEQ ID NO:	Amino acid sequence
16Fr33_QA	31	VDAKFDKEAYRAQAEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
17Fr33_QE	32	VDAKFDKEAYRAQEEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
18Fr33_QL	33	VDAKFDKEAYRAQLEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
19Fr33_QQ	34	VDAKFDKEAYRAQQEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
20Fr33_QR	35	VDAKFDKEAYRAQREIARLPNLTEEQRAGFIQS_KDDPSVSKAILAEAKLNDAQAPK
21Fr33_RA	36	VDAKFDKEAYRAFAEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
22Fr33_RE	37	VDAKFDKEAYRAFEIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
23Fr33_RL	38	VDAKFDKEAYRAFLIARLPNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
24Fr33_RQ	39	VDAKFDKEAYRAFQEIARLPNLTEEQRAGFIQS_KDDPSVSKAILAEAKLNDAQAPK
25Fr33_RR	40	VDAKFDKEAYRAFREIAR_PNLTEEQRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
1_VH3K2	41	VDAKFDKEAYRALAEIARLPNLTEESRAGFIQSLKDDPSVSKAILAEAKLNDAQAPK
	42	VDNKFNKEQQTALAEIL HLPNLNEEQRNA FIQSLKDDPSQSANLLAEAKLNDAQAPK
	43	VDNKFNKEQYTALAEIL HLPNLNEEQRNA FIQSLKDDPSQSANLLAEAKLNDAQAPK
	44	VDNKFNKCYQTALACIL HLPNLNECQRNA FIQSLKDDPSQSANLLACAKLNDAQAPK
	45	VDNKFNKEQQTALAEIARLPNLNEEQRNA FIQSLKDDPSQSANLLAEAKLNDAQAPK
	46	VDNKFNKEAQEALAEILHLPNLNEEQRNA FIQSLKDDPSQSANLLAEAKLNDAQAPK
	47	VDNKFNKEAQRALAEILHLPNLNEEQRNA FIQSLKDDPSQSANLLAEAKLNDAQAPK
	48	VDNKFNKEAYRALAEILHLPNLNEEQRNA FIQSLKDDPSQSANLLAEAKLNDAQAPK
	49	VDNKFNKEAYRALWEILHLPNLNEEQRNA FIQSLKDDPSQSANLLAEAKLNDAQAPK
	50	VDNKFNKFAYRAIWFIARI PNI NFFQRNA FIQSI KDDPSQSANI I AFAKI NDAQAPK
	51	VDNKFNKFAYRAIAFIARI PNI NFFQRNA FIQSLKDDPSQSANLLAEAKLNDAQAPK
	52	VDNKFNKEAYRALAEIHLLPNLNEEQRNA FIQSLKDDPSQSANLLAEAKLNDAQAPK
	53	VDNKFNKEAYRALWEIHLLPNLNEEQRNA FIQSLKDDPSQSANLLAEAKLNDAQAPK
	54	VDNKFNKEAYRALAEIARLPNLNEEQRNGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	55	VDNKFNKEAYRALAEIARLPNLNEEQRAAFIQSLKDDPSQSANLLAEAKLNDAQAPK
	56	VDNKFNKEAYRALAEIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	57	VDNKFNKEAYRAAAEIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	58	VDNKFNKEAYRAAEEIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	59	VDNKFNKEAYRAALEIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	60	VDNKFNKEAYRAAQEIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK

Fig. 5C

Denotation	SEQ ID NO:	Amino acid sequence
	61	VDNKFNKEAYRAAREIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	62	VDNKFNKEAYRAEAEIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	63	VDNKFNKEAYRAEEEIAR_PNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	64	VDNKFNKEAYRAELEIARLPNLNEECRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	65	VDNKFNKEAYRAEQEIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	66	VDNKFNKEAYRAEREIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	67	VDNKFNKEAYRALAEIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	68	VDNKFNKEAYRALEEIARLPNLNEECRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	69	VDNKFNKEAYRALLEIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	70	VDNKFNKEAYRALQEIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	71	VDNKFNKEAYRALREIARLPNLNEEQRAGFIQS_KDDPSQSANLLAEAKLNDAQAPK
	72	VDNKFNKEAYRAQAEIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	73	VDNKFNKEAYRAQECIARLPNLNECQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	74	VDNKFNKEAYRAQLCIARLPNLNECQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	75	VDNKFNKEAYRAQQEIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	76	VDNKFNKEAYRAQREIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	77	VDNKFNKEAYRARAEIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	78	VDNKFNKEAYRAREEIARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	79	VDNKFNKEAYRARLEIARLPNLNEEQRAGFIQS_KDDPSQSANLLAEAKLNDAQAPK
	80	VDNKFNKEAYRARQFIARLPNLNEFFQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	81	VDNKFNKEAYRARREEARLPNLNEEQRAGFIQSLKDDPSQSANLLAEAKLNDAQAPK
	82	VDNKFNKEAYRALAEIARLPNLNEESRAGFIQSLKDDPSQSKALAEAKLNDAQAPK
CFr33	83	ADNKFNKEQCNAFYEILHLPNLTEEQRNGFIQSLKDDPSVSKEILAEAKKLNDAQAPK
BFr33	84	ADNKFNKEQCNAFYEILHLPNLNEEQRNGFIQSLKDDPSQSANLLAEAKKLNDAQAPK
AFr33	85	ADNN_FNKEQQNAFYEILNMPNLNEEQRNGFIQSLKDDPSQSANLLSEAKKLNESQAPK
DFr33	86	ADAQQNKFNKDQQSAFYEILNMPNLNEEQRNGFIQSLKDDPSQSTNVLGEAKKLNESQAPK
EFr33	87	AQCNAFYQVLNMPNLNADQRNGFIQSLKDDPSQSANVLGEAQKLNDSQAPK
	88	VDAKFDKEAQEAFYEILHLPNLTEEQRNAFIQSLKDDPSVSKAILAEAKLNDAQAPK
Z	89	VDNKFNKEQQNAFYEILHLPNLNEEQRNAFIQSLKDDPSQSANLLAEAKLNDAQAPK