

## Supplemental Information

### Methods

#### Crystallization and diffraction

Cetuximab Fab was mixed with each meditope at a 1:10 molar ratio and screened using the Qiagen JCSG Core Suites (I-IV) at 20 °C. Co-crystals that diffracted beyond 2.2 Å were grown in 100 mM sodium phosphate/citrate, pH 4.5, 2.5 M sodium/potassium phosphate and 1.6 % w/v meso-erythritol. The crystals were wicked through 14% (w/v) meso-erythritol and flash frozen in liquid nitrogen. Diffraction data were collected at the Stanford Synchrotron Radiation Lab (SSRL), beam lines 9.1 and 11.1 at 100 K.

Parental or trastuzumab memAb Fab were mixed with Protein A and Protein L at 1:1:1 ratio and screened using the Qiagen JCSG Core Suites (I-IV) at 20 °C. Each trastuzumab Fabs was concentrated and dialyzed against 50 mM Tris pH 8.0, 25 mM NaCl. Crystals were grown by the hanging-drop vapor diffusion method using an equal volume of 1:1:1 molar ratio of 70 µM Fab, Protein A and Protein L solution and mother liquor consisting of 20 % w/v PEG 3350, 200 mM NaCl and 100 mM HEPES pH 7.2. The crystals were wicked through mother liquor containing 14% (w/v) meso-erythritol and flash frozen in liquid nitrogen. The trastuzumab memAb Fab, Protein A and Protein L solution was mixed with the cQFD meditope and crystals were screened under the same conditions observed for the memAb Fab:Protein L:Protein A co-crystal. Diffraction data were collected at SSRL and with a home source.

#### Structure refinement

Meditope-cetuximab Fab - Analysis of the diffraction data from the cQFD-Fab crystals indicated that the unit cell dimensions and space group were similar to the cetuximab Fab structure already deposited in the Protein Data Bank (1YY8) (1). The initial phases were determined by molecular replacement using the program Phaser (2) and the unliganded structure of cetuximab (pdb:1YY8 – chains A and B). Two Fabs were placed in the asymmetric unit with a Matthews Coefficient of 3.26 and solvent content of 62.4%. The Z scores (standard deviation of the solution over the mean) were 27 and 25 for the rotational search and 38 and 71 for the translational search. A third Fab fragment could not be placed (three Fabs in the asymmetric unit cell produces a reasonable Matthews coefficient of 2.18 at 43% solvent). After an initial round of refinement using the Fab only, a continuous stretch of unmodeled density consistent with the cyclic peptide was observed. The peptide was built manually into the density using Coot (3), refined in Phenix (2). The R and  $R_{Free}$  dropped accordingly. Water molecules were added during refinement using Phenix (2). For comparison, we also solved the structure of the cQYN peptide bound to the cetuximab Fab using the cQFD-Fab model. The structures have been deposited in the PDB as: 4GW1 (cQFD) and 4GW5 (cQYN).

“Apo”-parental and memAb trastuzumab Fabs and meditope-memAb trastuzumab Fab structure refinement - The initial phases were determined by molecular replacement using the program Phaser (2). First, the position of the Fab was

identified using coordinates from 1N8Z (4). Next, Protein A and Protein L were placed using coordinates from 1HEZ (5) and 1DEE. (6), respectively. The mediotope was built into the electron density manually using Coot (3) and refined as above. The structures have been deposited in the PDB as: 4HKZ (parental), 4HJG (“apo memAb”) and 4IOI (memAb with cQFD).

### References:

1. Li S, *et al.* (2005) Structural basis for inhibition of the epidermal growth factor receptor by cetuximab. *Cancer Cell* 7(4):301-311.
2. Adams PD, *et al.* (2010) PHENIX: a comprehensive Python-based system for macromolecular structure solution. *Acta Crystallogr D Biol Crystallogr* 66(Pt 2):213-221.
3. Emsley P, Lohkamp B, Scott WG, & Cowtan K (2010) Features and development of Coot. *Acta Crystallogr D Biol Crystallogr* 66(Pt 4):486-501.
4. Cho HS, *et al.* (2003) Structure of the extracellular region of HER2 alone and in complex with the Herceptin Fab. *Nature* 421(6924):756-760.
5. Graille M, *et al.* (2001) Complex between *Peptostreptococcus magnus* protein L and a human antibody reveals structural convergence in the interaction modes of Fab binding proteins. *Structure* 9(8):679-687.
6. Graille M, *et al.* (2000) Crystal structure of a *Staphylococcus aureus* protein A domain complexed with the Fab fragment of a human IgM antibody: structural basis for recognition of B-cell receptors and superantigen activity. *Proc Natl Acad Sci U S A* 97(10):5399-5404.

**Table S1.** Experimental and refinement statistics for meditope-cetuximab Fab, “apo”-parental trastuzumab and meditope- and “apo”-memAb trastuzumab crystal structures

	Cetuximab + cQFD (4GW1)	Cetuximab + cQYN (4GW5)	Parental Trast (4HKZ)	Trast memAb (4HJG)	Trast memAb + cQFD (4IOI)
Data collection					
Space group	P2 <sub>1</sub> 2 <sub>1</sub> 2 <sub>1</sub>	P2 <sub>1</sub> 2 <sub>1</sub> 2 <sub>1</sub>	P2 <sub>1</sub> 2 <sub>1</sub> 2 <sub>1</sub>	P2 <sub>1</sub> 2 <sub>1</sub> 2 <sub>1</sub>	P2 <sub>1</sub> 2 <sub>1</sub> 2 <sub>1</sub>
Cell dimensions					
<i>a</i> , <i>b</i> , <i>c</i> (Å)	64.26 82.58 211.63	64.16 82.52 211.88	53.52 104.67 117.55	53.31 104.98 117.82	53.31 105.11 117.62
$\alpha$ , $\beta$ , $\gamma$ (°)	90, 90, 90	90, 90, 90	90, 90, 90	90, 90, 90	90, 90, 90
Resolution (Å)	19.85-2.24 (2.30-2.24)*	29.61-2.20 (2.26-2.20)*	47.81-2.08 (2.13-2.08)*	33.50-2.00 (2.05-2.00)*	33.58-1.95 (2.00-1.95)*
<i>R</i> <sub>merge</sub>	0.078 (0.50)*	0.067 (0.26)*	0.076 (0.470)*	0.055 (0.266)*	0.047 (0.452)*
<i>I</i> / $\sigma$ <i>I</i>	17.0 (3.1)*	25.5 (6.0)*	14.4 (3.1)*	24.8 (5.8)*	23.6 (3.35)*
Completeness (%)	97.4 (83.3)*	99.9 (100)*	99.0 (92.3)*	97.6 (90.7)*	91.7 (98.4)*
Redundancy	4.2 (3.2)*	7.9 (8.2)*	4.2 (3.2)*	4.7 (4.4)*	4.5 (4.4)*
Refinement					
Resolution (Å)	19.85-2.24	29.61-2.20	47.81-2.08	33.50-2.00	33-58-1.95
No. reflections	53791	58047	40076	44427	44750
<i>R</i> <sub>work</sub> / <i>R</i> <sub>free</sub>	18.2/22.6	17.4/22.2	16.4/20.7	15.3/19.5	17.3/20.2
No. atoms					
Protein	6602	6528	4306	4352	4326
Meditope/ion	200/15	188/15	0/1	-/-	97/-
Water	581	618	557	733	541
<i>B</i> -factors					
Protein	31.4	32.0	28.7	20.4	26.2
Meditope/ion	50.3/67.4	64.0/44.2	-/31.3	-/-	28.9/-
Water	37.5	38.7	36.8	33.6	34.8
R.m.s. deviations					
Bond lengths (Å)	0.004	0.007	0.007	0.007	0.007
Bond angles (°)	0.913	1.100	1.066	1.065	1.090
Ramachandran favored/disallowed	97.3/0.0	97.8/0.0	99.1/0.0	98.6/0.0	98.4/0.0

\* Last shell

**Table S2.** Buried Surface Area of Select Fab Binding Proteins

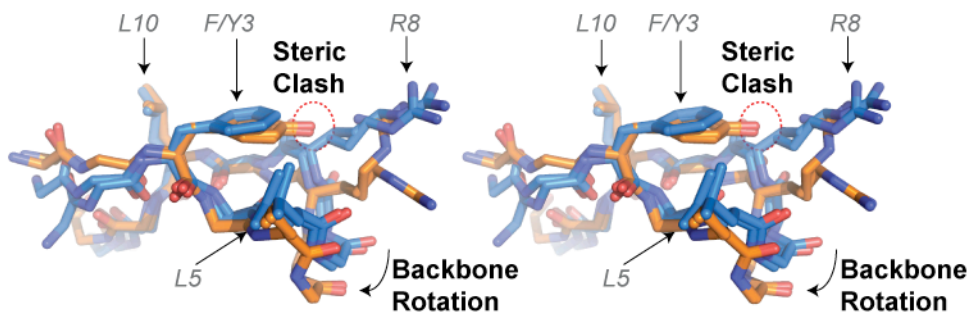
Protein/ Peptide	Buried surface area ( $\text{\AA}^2$ )	Protein Data Bank ID
cQFD	904	-
cQYN	787	-
Protein A	580	1DEE
Protein L	714 (646)*	1HEZ
Protein G	518 (184)*	1QKZ

\* Buried surface area of secondary binding sites.

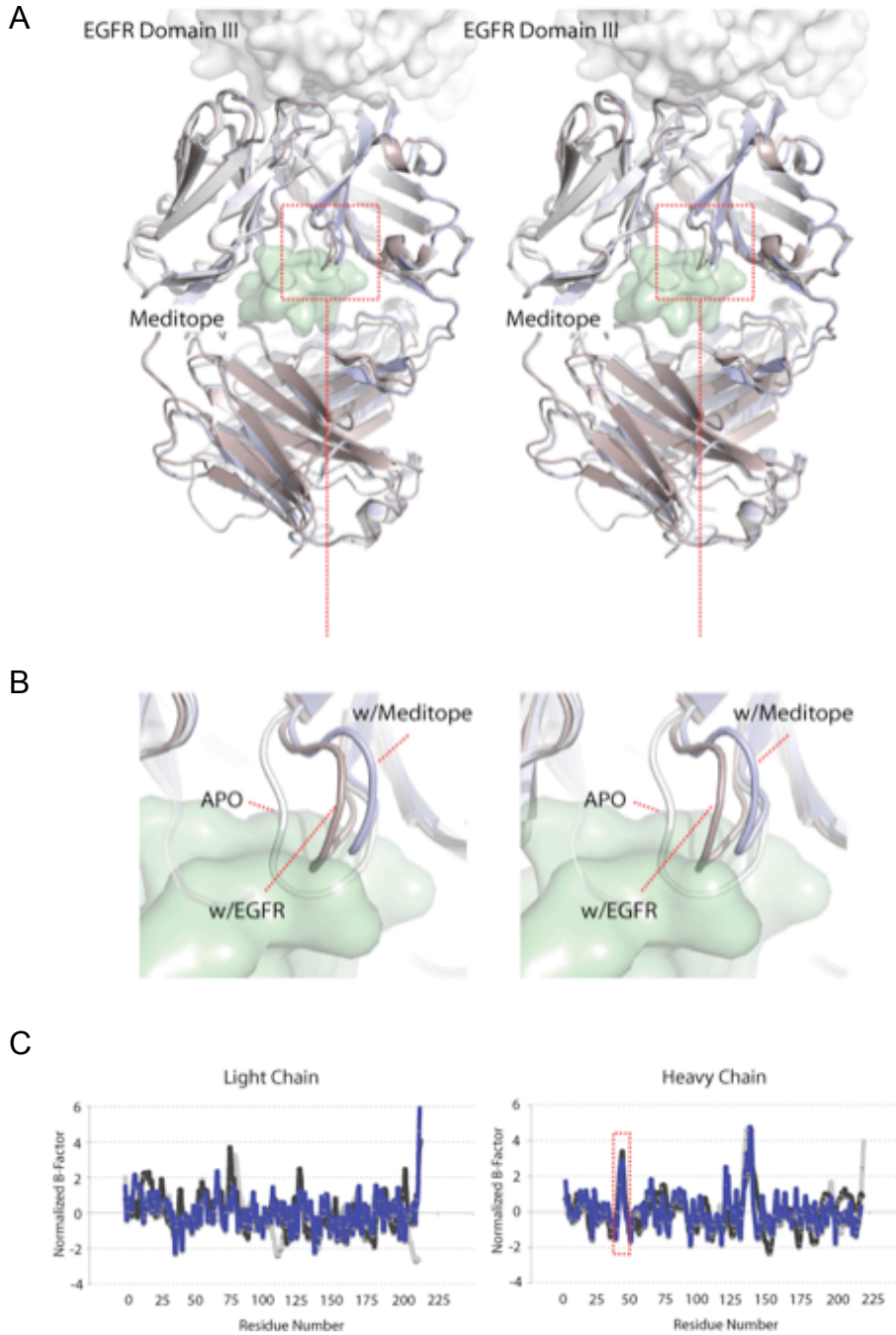
**Table S3.** Dissociation constants of mediotope variants as determined by SPR

Ligand	$K_D$ ( $\mu\text{M}$ )
cQFDLSTRRLKc	0.43
cQ <b>A</b> DLSTRRLKc	34
cQFD <b>A</b> STRRLKc	57
cQFDLST <b>A</b> RLKc	140
cQFDKSTRR <b>A</b> Kc	2.2

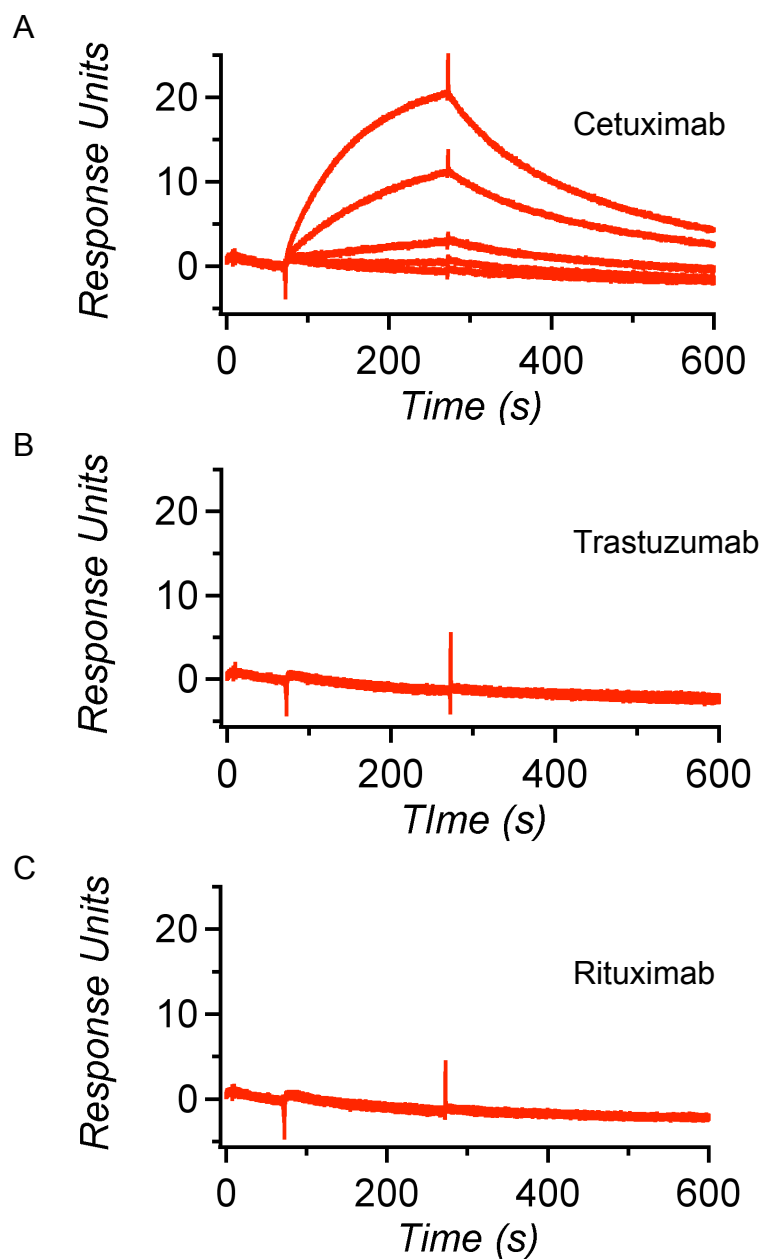
\* Mutated residue is bolded in red.



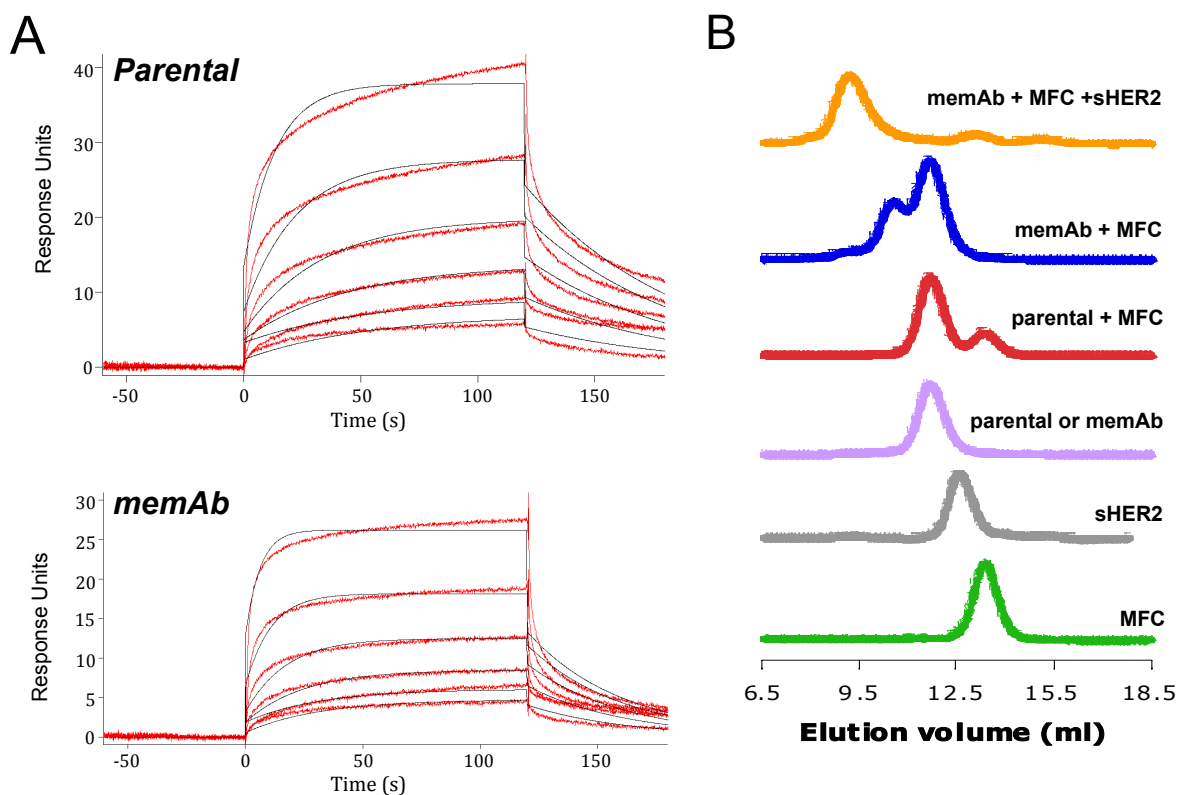
**Figure S1.** Mediotope binding pocket of cetuximab. Stereoview overlay of cQFD (blue carbons) and cQYN (orange carbons) bound to cetuximab Fab. The hydrophobic side chains of Phe/Tyr3, Leu5 and Leu10 of the two mediotopes overlap and maintain a similar interaction with the Fab.



**Figure S2.** Overall structure of cetuximab is unperturbed by meditope binding. (A) Superposition of EGFR-Fab (red) and cQFD meditope-Fab (blue). (B) Enlarged view of the meditope binding site, showing the framework loop2 (residues 39–44) position shifts. (C) B-factors of apo- (grey), EGFR-liganded (black), and meditope-liganded cetuximab Fab (blue) are plotted as a function of residue number. Residues 36–46 of the heavy chain are boxed in red.

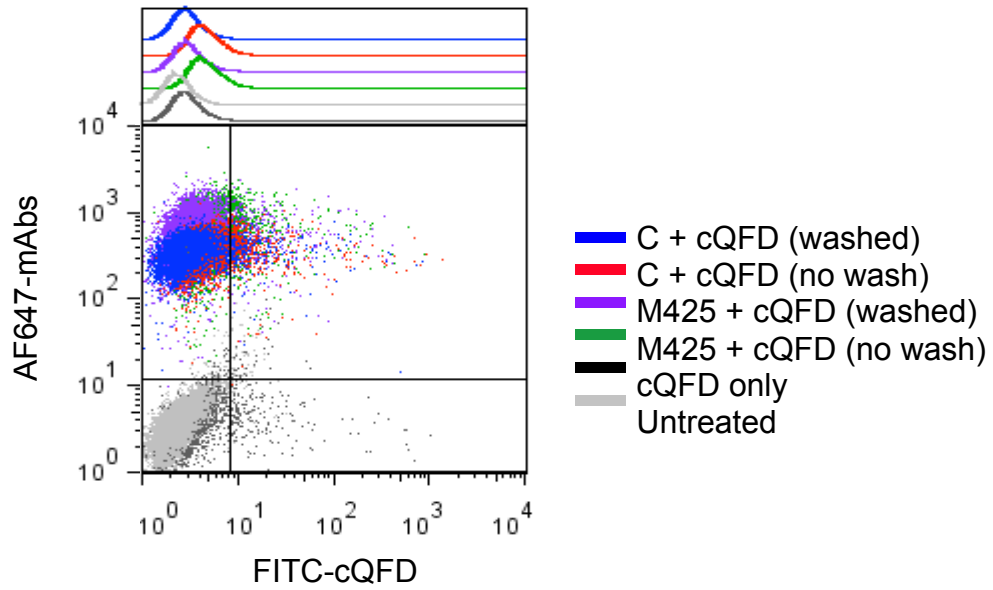


**Figure S3.** SPR sensograms of (A) cetuximab, (B) trastuzumab and (C) rituximab IgG interactions with immobilized, synthetic cQFD mediotope ligand at 25 °C. Analyte concentrations are 0, 10, 100, 500 and 1000 nM.

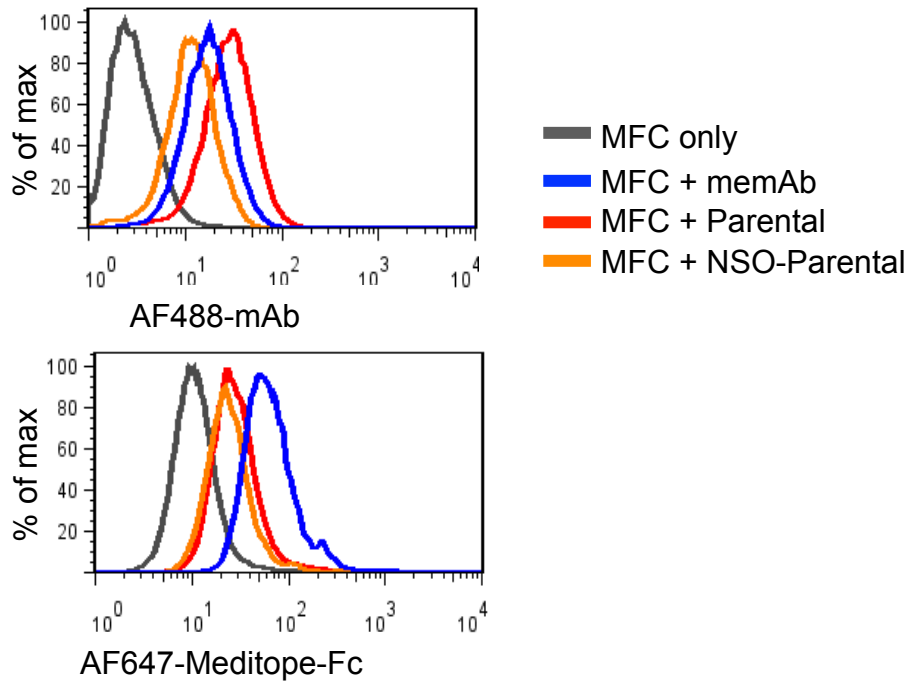


**Figure S4:** (A) SPR sensograms of parental trastuzumab Fab (top) and meditope enabled trastuzumab (memAb) Fab (bottom) comparing the binding kinetics of each to immobilized sHER2. (B) Size exclusion chromatography of parental or memAb trastuzumab Fabs, sHER2, and meditope-Fc (MFC), Also shown are admixtures of MFC with each trastuzumab Fab, and admixture of sHER2, MFC and memAb Fab.





**Figure S5.** Monomeric meditope has weak affinity to cetuximab pre-labeled cells. Cetuximab (C) or M425 were preincubated with MDA-MB-468 cells. 3  $\mu$ M of monomeric meditope (cQFD) were added, and were either washed or not washed before proceeding to FACS analysis.



**Figure S6.** Meditope-enabling mutations did not interfere with antigen recognition. Commercial trastuzumab (Parental), trastuzumab produced from NS0 cells (NS0-Parental) and memAb trastuzumab (memAb) were labeled with Alexa Fluor 488 and applied to SKBR3 cells (top panel). Alexa Fluor 647-meditope-Fc (MFC) were then applied after excess mAbs were washed off. The three mAbs bound to cells in the same range, but only memAb labeled cells have enhanced MFC binding.

Alignment S1  
accession #

Aligned sequence

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Cetux.	26	SQS-I-G-T-----NIHWYQQR <sup>T</sup> NGSPRLLIKYASE----SISGIPSRFSGS--GSGTDFTLTIS-SVESEDIAD <sup>D</sup> YYCQ	89
Ch14.18	26	SQSLVHRNGNTYLHWYLHWYLQKPGQSPKLLIHKVSN----RFSGVPRFSGS--GSGTDFTLKIS-RVEAEDLGVIYFCS	89
Trast.	26	SQD-V-N-T-----AVAWYQKPKGKAPKLLIYSASF----LYSGVPSRFSGS--RSGTDFTLTIS-SLQPEDFATYYCQ	89
Ritux.	26	SSS-V--S-Y-----IHWYQKPKGSSPKWIYATSN----LASGVPVRFSGS--GSGTSYSLTIS-RVEAEDAATYYCQ	89
M425	26	SSS-V--T-Y-----MYWYQKPKGSSPRLLIYDTSN----LASGVPVRFSGS--GSGTSYSLTIS-RMEAEDAATYYCQ	89
BAH03696	26	SQS-I---SS--N---FAWYQKPKGQSPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYYCQ	89
3D85_A	26	SQS-I-S-D-----YLHWYRQKSHESPRLLIKYASQ----SISGIPSRFSGS--GSGSDFTLTIS-SVEPEDVGVYYCQ	89
BAB18257	26	SQS-V---SS--Y---LAWYQKPKGQAPRLLINDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFVYYCQ	89
BAC01759	48	SQS-V---SSN-----LAWYQKPKGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYYCQ	111
AAH30813	46	SQS-V---TS--N---LAWYQQT <sup>T</sup> PGQSPRLVIYASS----RASGVPARFSGS--GSGTEFTLTIS-SLQSEDFAVYYCQ	109
3GIZ_L	26	SQS-V---SS--Y---LAWYQKPKGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFVYYCQ	89
BAC01747	48	SQS-V---SSN-----LAWYQKPKGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYYCQ	111
BAC01743	48	SQS-V---SSN-----LAWYQKPKGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYYCQ	111
BAA33580	26	SQS-V---RS--N---LAWYQKPKGQAPRLLIYAAS <sup>T</sup> ----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYYCQ	89
BAC53922	26	SQS-V---NN--Y---LAWYQKPKGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFVYYCQ	89
AAB86466	48	SQS-V---RS--N---LAWYQKPKGQAPRLLIYAAS <sup>T</sup> ----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYYCQ	111
BAH03697	26	SQS-V---SSN-----LAWYQKPKGQAPRLLIYGAST----RATGIPARFNGG--GSGTDFTLTIS-SPQSENFAVYHCQ	89
BAC01744	48	SQS-V---SSN-----LAWYQKPKGQAPRLLIYGAST----RATGIPARFSGS--GSGKEFTLTIS-SLQSEDFAVYYCQ	111
BAF48994	26	SQS-V---GS--N---LAWYRQKPKGQAPRLLMYGAST----RVAGVPARFSGS--GSGTDFTLTIS-NLQSEDFAVYYCQ	89
JE0244	26	SQS-V---HS--N---LAWYQKPKGQAPRLLIYR <sup>A</sup> ST----RATGIPARFSGS--GSGTDFILTIS-SLQSEDFALYYCQ	89
2VXV_L	26	SES-I---SS--N---LAWYQKPKGQAPR <sup>L</sup> FIY <sup>A</sup> ST----RATDIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYYCQ	89
JE0243	26	SQS-V---AT--N---VWVYMQKLGQAPRLLIYD <sup>A</sup> ST----RATGVPARFSGS--GSGTEFTLTIS-SLQSEDFAIYYCQ	89
3EYQ_C	27	SQS-V---SS--Y---LAWYQKPKGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFVYYCQ	90
BAC01696	48	SQS-V---SS-----YLAWYQKPKGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFVYYCQ	111
1RZ8_A	26	SES-V---SS--D---LAWYQKPKGQAPRLLIYGAST----RATGVPARFSGS--GSGAEFTLTIS-SLQSEDFAVYYCQ	89
1I9R_L	26	SQR-V-S-SST-Y-SYMHWYQKPKGQPPKLLIKYASN----LESGVPARFSGS--GSGTDFTLTIS-SVEPEDFATYYCQ	93
3KYK_L	26	SQS-V---SS--Y---LAWYQKPKGQAPRLLIYDASN----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYYCQ	89
3L5X_L	26	SKS-I---SK--Y---LAWYQKPKGQAPRLLIYSGST----LQSGIPARFSGS--GSGTDFTLTIS-SLEPEDFVYYCQ	89
3F12_A	27	SQS-V---SS--Y---LAWYQKPKGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFVYYCQ	90
BAC01752	48	SQS-V---SSN-----LAWYQKPKGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYYCQ	111
BAC01756	48	SQS-V---SSN-----LAWYQKPKGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYFCQ	111
BAK48745	26	SQS-V---SS--Y---LAWYQKPKGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFVYYCQ	89
ACF34453	26	SLS-V---SG--N---LAWYQKPKGQAPRLLINGAST----GAAGVPARFSGS--GFGTEFTLTIS-SLQSEDFAVYYCQ	89
BAB18251	26	SQS-V---SS--Y---LAWYQKPKGQAPRLLIYDASN----RATGIPVRFSGS--GSGTDFTLTIS-SLEPEDFVYYCL	89
BAC01749	48	SQS-V---SSN-----LAWYQKPKGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYYCQ	111
3B2U_L	26	SQS-V---SS--Y---LAWYQKPKGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFVYYCH	89
AAO17825	46	SQT-A---SR--Y---LAWYQKPKGQAPRLLIYDTSN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFVYYCQ	109
3EYF_A	27	SQS-V---GG--Y---LTWYQHKPGQAPRLLIFDASI----RATGIPARFSGS--GSGTDFTLTIT-RLEPEDFVYYCQ	90
BAC01737	48	SQS-V---SS-----YLAWYQKPKGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFVYYCQ	111
3FN0_L	24	SQS-V---GR--N---LGWYQKPKGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFVYYCQ	87
1GC1_L	26	SES-V---SS--D---LAWYQKPKGQAPRLLIYGAST----RATGVPARFSGS--GSGAEFTLTIS-SLQSEDFAVYYCQ	89
1G9M_L	26	SES-V---SS--D---LAWYQKPKGQAPRLLIYGAST----RATGVPARFSGS--GSGAEFTLTIS-SLQSEDFAVYYCQ	89
AAB20217	26	SQS-V---SY--N---LAWYQKPKGQAPRLLIYSTSI----RATGIPARFSGS--GSETEFTLTIS-ILQSEDFAVYYCQ	89
3NCJ_L	26	SQS-I-----G-LYLAWYQKPKGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	89

ABG79005	24	SQN-I---GT--W---LAWFQQKPGQTPRLLIYDASK----RAAGIPARFSGS--GSGTDFTLTIN-SLEAEDFAVYYCQ	87
3L5Y_L	26	SKS-I---SK--Y---LAWYQQKPGQAPRLLIYSGST----LQSGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYYCQ	89
AAA73002	159	SQS-V---GS--Y---LAWYQQKPGQAPRPLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYYCQ	222
3HC3_L	26	SQN-V-----G-INVAWYQQKPGKAPKLLISSASY----RYSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	89
2WUB_L	26	SQD-V-----S-TAVAWYQQKPGKAPKLLIYSASF----LYSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	89
BAA97671	26	SQS-I-----S-SYLNWYQQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDLATYFCQ	89
BAF64543	26	SQS-V---SSS-Y---LAWYQQKPGQAPRLLIYDASN----RATGIPDRFSGS--GSGTDFTLTIN-RLEPEDFAVYYCQ	90
2FJH_L	26	SQV-I-----R-RSLAWYQQKPGKAPKLLIYAASN----LASGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	89
3NA9_L	26	SQS-I-----G-LYLAWYQQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	89
2V7N_A	26	SQS-V---SSN-Y---LAWYQQKPGQAPRLLIYDSSS----RATGVPARFSGS--GSGTDFTLTIS-SLEPEDFAVYYCH	90
3HC0_L	26	SQN-V-----G-INVAWYQQKPGKAPKLLISSASY----RYSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	89
1VGE_L	26	SQG-I-----S-SALAWYQQKPGKAPRLLIYDASN----LESGVPSRFSGS--GSGTDFTLTIS-SLQPEDFAIYYCQ	89
3FCT_A	26	SQN-V-----G-TPVAWYQQKPGQSPKLLIYSASN----RYTGVDRFTGS--GSGTDFTLTIS-NMQSEDLADYFCQ	89
3BN9_C	26	SQG-I-----S-SYLAWYQQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFAVYYCQ	89
BAC01706	48	SQS-I-----S-SWLAWYQQKPGKAPKLLIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYFCQ	111
BAC01768	48	SQG-I-----S-SYLAWYQQKPGKAPKLLIYAASST----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	111
ABU90613	26	SQG-I-----G-TWLAWYQQRPKAPPELLIYSASS----LQGGVPSRFSGS--GSGTDFTLTIS-SLQAEEDFATYFCQ	89
BAF64542	26	SQS-V---SSS-Y---LAWYQQKPGQAPRLLIYDASN----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ	90
1QLR_A	26	SQS-V---SSN-Y---LAWYQQKPGQAPRLLIYDASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ	90
BAF64541	26	SQS-V---SSS-Y---LAWYQQKPGQAPRLLIYDASN----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ	90
1B4J_L	26	SEN-V-----D-TYVSWYQQKPEQSPKLLIYGASN----RYTGVDRFTGS--GSATDFTLTIS-SVQAEDLADYHCG	89
BAC01673	48	SQG-I-----S-SWLAWYQQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	111
BAC80155	26	SQS-I-----S-SYLNWYQQRPQAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	89
3P0V_L	26	SQD-L-----A-TDVAWYQQKPGKAPKLLIYSASF----LYSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	89
BAC01726	48	SQS-I-----S-SYLNWYQQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	111
BAC01728	48	SQS-I-----S-SWLAWYQQKPGKAPKLLIYKASS----LESGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	111
3SOB_L	49	SQD-V-----S-TAVAWYQQKPGKAPKLLIYSASF----LYSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	112
3E09_L	26	SKT-I-----S-KYLAWYQQKPGKAPKLLIYSGST----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	89
BAC01671	48	SQS-V-----T-SYLNWYQQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYFCQ	111
BAC01725	48	SQS-I-----S-SYLNWYQQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDLATYFCQ	111
3N85_L	26	SQS-V-----S-SAVAWYQQKPGKAPKLLIYSASS----LYSGVPSRFSGS--RSGTDFTLTIS-SLQPEDFATYFCQ	89
BAF48998	26	SQD-I-----S-SWLAWYQQKPGKAPKLLIYAASST----LQSGVPSRFSGS--GSGTDFSLTIN-SLQPEDFATYFCQ	89
2FJF_L	26	SQD-V-----S-TAVAWYQQKPGKAPKLLIYSASF----LYSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	89
1DEE_A	26	SQS-I-----S-SYLNWYQQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	89
BAC01757	48	SQS-V---SS-----YLAWYQQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYYCQ	111
1HEZ_A	26	SQS-I-----S-SYLNWYQQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	89
2R56_L	26	SQG-I-----S-SRLAWYQQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYFCQ	89
3HI5_L	27	SQS-I-----G-SYLNWYQQTKGAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQLEDFATYFCQ	90
2HFF_A	26	SQD-V-----S-TAVAWYQQKPGKAPKLLIYSASF----LYSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	89
3IU4_L	26	SQD-V-----S-TAVAWYQQKPGQSPKLLIYSASY----RYTGVDRFTGS--GSGTDFTLTIS-SVQAEDLAVYYCQ	89
2HFG_L	26	SQD-V-----S-TAVAWYQQKPGKAPKLLIYSASF----LYSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	89
BAC01709	48	SQD-I-----S-NYLNWYQQKPGKAPKLLIYDASN----SETGVPSRFSGS--GSGTDFTLTIS-SLQPEDIATYFCQ	111
BAC01766	48	SQS-I-----S-SYLNWYQQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	111
1ZA6_A	26	SQS-LLY-SGN-QKNYLAWYQQKPGQSPKLLIYWASA----RESGVDRFSGS--GSGTDFTLTIS-SVQAEDVAVYYCQ	95
ACF34418	26	SQS-I-----G-SWLWVYQQTAGKAPKLLIYASST----LQSGVPSRFSGS--GSGTDFTLTIN-SLQPEDFATYFCQ	89
1U6A_L	26	SQS-V---SSR-Y---LAWYQQKPGQAPRLLIYDASN----RATGIPDRFSGS--GSGTDFTLTIS-RVEPEDFAVYYCQ	90
3HMW_L	26	SQG-I-----S-SWLAWYQQKPEKAPKSLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYFCQ	89

1RZG\_B 26 SQS-I-----S-NWLAWYQOKPGRAPKLLMYKASS----LKSGVPSRFRSGS--GSGTEFTLTIS-SLQSDDFATYYCQ 89  
AAS01771 48 SQG-I-----S-NYLAWYQOKPGKVPKLLIYAASST----LQSGVPSRFRSGS--GSGTDFTLTIS-SLQPEDVATYYCQ 111  
3U30\_B 26 SQD-V-----S-TAVAWYQOKPGKAPKLLIYSAKF----LYSGVPSRFRSGS--GSGTDFTLTIS-SLQPEDFATYYCQ 89  
3QEG\_L 26 SQS-V---SSS-Y---LAWYQOKPGQAPRLLIYGASS----RATGIPDRFRSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ 90  
BAC01736 48 SQS-V---SSS---YLAWYQOKPGQAPRLLIYGASS----RATGIPDRFRSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ 112  
BAC01727 48 SQS-I-----S-SYLNWYQOKPGKAPKLLIYAASS----LQSGVPSRFRSGS--GSGTDFTLTIS-SLQPEDFATYYCQ 111  
BAC01679 48 SQS-I-----S-SYLNWYQOKPGKAPKLLIYAASS----LQSGVPSRFRSGS--GSGTDFTLTIS-SLQPEDFATYYCQ 111  
BAB18261 26 SQS-I-----R-SYLSWYQOKPGKAPKLLIYAASS----LQSGVPSRFRSGS--GSGTDFTLTIS-SLQPEDFATYYCQ 89  
ACF34419 26 SQS-I-----S-TWLAWYQOKPGKAPKLLIYKAST----LESGVPSNFRSGS--GSGTEFTLTIS-SLQPDQFATYYCQ 89  
3L5W\_L 26 SKS-I-S-K-----YLAWYQEKPGKTNKLLIYSGST----LQSGIPSRFRSGS--GSGTDFTLTIS-SLEPEDFAMYFCQ 89  
BAA37169 26 SQS-I-----S-SYLNWYQOKPGKAPKLLIYAASS----RATGIPDRFRSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ 89  
AAM46660 18 SQS-I-G-S-----SLHWYQOKPDQSPKLLIYASQ----SFGVPSRFRSGS--GSGTDFTLTIN-SLEAEDAATYYCH 81  
3MXV\_L 26 SQS-V-----S-NDLTWYQOKPGQSPKLLIYASN----RYTGVDRFRFTGS--GYGTDFFTTIS-TVQAEDLAVYFCQ 89  
3PGF\_L 27 SQS-V-----S-SAVAWYQOKPGKAPKLLIYASASS----LYSGVPSRFRSGS--RSGTDFTLTIS-SLQPEDFATYYCQ 90  
BAC01670 48 SQS-I-----T-NYLNWYQOKPGKAPNLLIYAASS----LQSGVPSRFRSGS--GSGTDFTLTIS-SLQPEDFATYYCQ 111  
AAS01772 48 SQG-I-----S-SWLAWYQOKPGKAPKLLIYDASS----LQSGVPSRFRSGS--GSGTDFTLTIS-SLQPEDFATYYCQ 111  
2AGJ\_L 26 SET-V---SND-K---VAWYQOKPGQAPRLLIYGASS----RATGIPDRFRSGS--GSGTDFTLTISIS-GLEPEDFVYVYYCQ 90  
BAC01704 48 SQS-I-----S-SYLNWYQOKPGKAPKLLIYAASS----LQSGVPSRFRSGS--GSGTDFTLTIS-SLQPEDFATYYCQ 111  
BAC01735 48 SQS-V---SSS---YLAWYQOKPGQAPRLLIYGASS----RATGIPDRFRSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ 112  
ACF34416 26 SQS-I-----G-TWLAWYQOKPGKAPKLLIYKASN----LESGVPSIFRSGS--GSGTEFTLTIS-SLQPDFFATYYCQ 89  
2JIX\_A 26 SQG-I-----R-NDLGWYQOKPGKAPKLLIYAASS----LQSGVPSRFRSGS--GSGTEFTLTIS-SLQPEDFATYYCL 89  
1N8Z\_A 26 SQD-V-----N-TAVAWYQOKPGKAPKLLIYASAF----LYSGVPSRFRSGS--RSGTDFTLTIS-SLQPEDFATYYCQ 89  
1B6D\_A 26 SQD-I-----S-SYLNWYQOKPGKAPKLLIHAASS----LETGVPSRFRSGS--GSGTDFSTTIS-SLQPEDLATYYCQ 89  
1L7I\_L 26 SQD-V-----S-IGVAWYQOKPGKAPKLLIYASASY----RYTGVPSRFRSGS--GSGTDFTLTIS-SLQPEDFATYYCQ 89  
1TZG\_L 26 SQS-V---GNN-K---LAWYQORPGQAPRLLIYGASS----RPSGVADRFRSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ 90  
1B2W\_L 26 SEN-V-----D-TYVSWYQOKPGKAPKLLIYGASN----RYTGVPSRFRSGS--GSGTDFTLTIS-SLQPDFFATYYCG 89  
1FVD\_A 26 SQD-V-----N-TAVAWYQOKPGKAPKLLIYASAF----LESGVPSRFRSGS--RSGTDFTLTIS-SLQPEDFATYYCQ 89  
ACF34417 26 SQD-I-----N-NFLNWYQOKPGKAPNLLIYDASN----LQTVPSRFRSGS--GSGTDFTLTIT-TLQPEDIATYYCQ 89  
BAC01707 48 SQS-I-----S-SYLNWYQOKPGKAPKLLIYAASS----LQSGVPSRFRSGS--GSGTDFTLTIS-SLQPEDFATYYCQ 111  
ABU90580 26 SQY-I-----D-NYLNWYQOKPGKAPKLLIYGASN----LETGVPSRFRSGS--GSGTDFFTTIR-SLQPEDIATYYCQ 89  
3R1G\_L 26 SQD-V-----S-TAVAWYQOKPGKAPKLLIYASAF----LYSGVPSRFRSGS--GSGTDFTLTIS-SLQPEDFATYYCQ 89  
BAC01755 48 SQS-V---SSS---YLAWYQOKPGQAPRLLIYGASS----RATGIPDRFRSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ 112  
CAA75031 48 SQS-I-----A-DYLNWYQOKPGKAPKLLIYGSSS----LQSGVPSRFRSGS--GSGTDFTLTISIS-SLQPGDFATYYCQ 111  
BAC01701 48 SRG-I-----R-NDLGWYQOKPGKAPERLLIYAASST----LQSGVPSRFRSGS--GSGTEFTLTIS-SLQPEDFATYYCL 111  
1ZA3\_L 26 SQD-V-----N-TAVAWYQOKPGKAPKLLIYAASY----LYSGVPSRFRSGS--GSGTDFTLTIS-SLQPEDFATYYCQ 89  
ABU90646 26 SQS-VLH-SSY-NANYLAWYQOKQGPRLLIYWAST----RESGVDRFRSGS--GSGTDFTLTIS-SLQAEDVAVYYCQ 95  
BAC01760 48 SQS-V---SSS---YLAWYQOKPGQAPRLLICGASS----RATGIPDRFRSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ 112  
BAC01684 48 SQG-I-----A-NNLAWYQOTPGKVPKLLIYATST----LQSGVPSRFRSGS--GSGTDFTLTIS-SLQPEDVATYYCQ 111  
BAC01723 48 SQS-I-----S-SYLNWYQOKPGKAPKLLIYAASS----LQSGVPSRFRSGS--GSGTDFTLTIS-SLQPEDFATYYCQ 111  
2QQN\_L 26 SQY-F-----S-SYLAWYQOKPGKAPKLLIYGASS----RASGVPSRFRSGS--GSGTDFTLTIS-SLQPEDFATYYCQ 89  
2QQK\_L 26 SQD-V-----S-TAVAWYQOKPGKAPKLLIYASAF----LYSGVPSRFRSGS--GSGTDFTLTIS-SLQPEDFATYYCQ 89  
BAC01724 48 SQS-I-----S-SYLNWYQOKPGKAPKLLIYAASS----LQSGVPSRFRSGS--GSGTDFTLTIS-SLQPEDFATYYCQ 111  
BAC01748 48 SQS-V---SSS---YLAWYQOKPGQAPRLLIYGASS----RATGIPDRFRSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ 112  
BAC01738 48 SQS-V---SSS---YLAWYQOKPGQAPRLLIYGASS----RATGIPDRFRSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ 112  
JE0242 26 SQS-V---SNN-Y---LAWYQOKPGQAPSLLIYDASS----RATGIPDRFRSGS--GSGTDFILTIS-GLEPEDFAVYYCQ 90  
1RHH\_A 26 SQS-V---SSG-S---LAWYQOKPGQAPRLLIYGAST----RATGIPDRFRSGS--GSGTDFTLTIG-RLEPEDLAVYYCQ 90  
AAD29608 48 SQD-I-----N-NYLNWYQOKPGKTPKLLIYGASN----LETGVPSRFRSGS--GSGTDFIFTIS-SLQPEDIATYYCQ 111

3QRG_L	26	SQS-VDY-NGI---SYMHWYQOKPGQPPELLIYAASN----PESGVPDFRFSGS--GSGTDFTLTIS-SLQAEDVAVYYCQ	93
BAC01676	48	SQS-I-----S-SYLNWYQOKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	111
BAC01702	48	SQS-I-----S-TYLNWYQOKPGKAPKLLIYAASS----SQSGVPSRFSGS--GSGTDFTLTIN-SLQPEDFATYYCQ	111
3KR3_L	27	SQS-I-----S-NYLNWYQOKPGKAPKLLIYTAST----LQSGVPSRFSGS--ASGTDFTLTIN-SLQPEDFATYSCQ	90
ABU90625	26	NQD-I-----N-NYLNWYQOKPGKAPKLLIYDASN----LEIGVPSRFSGS--GSGTDFTLTIS-SLQPEDIATYYCQ	89
ABU90557	26	SQS-I-----N-SFLNWYQHKPGKAPNLLIYAASS----LQSGVPSRFSGS--ASGTDFTLTIS-NLQPEDFATYYCQ	89
AAW82027	46	SQD-I-----R-NYVAWYQOKSGKAPKLLIYAAST----LQSGVPSRFSGS--GSGTDFTLTIN-SLQSEDFATYYCQ	109
BAK48744	26	SQS-V---GI--K---LAWYQOKPGHAPRLLIYGATA----RATGIPGRFSGS--GSGTDFTLTIN-SLQPEDFATYYCQ	89
BAC01758	48	SQS-V---SSS---YLAWYQOKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ	112
1RZI_A	25	SQS-I-----S-SYLNWYQOKPGKVPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	88
BAB18259	26	SQG-I-----G-NYLVWFQOKPGKVPKLLIYAASS----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYYCL	89
2XA8_L	26	SQS-VDY-D-G-D-SYMNWYQOKPGKAPKLLIYAASY----LESGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	93
1RZ7_L	26	SQD-I-----S-TWLAWYQOKPGKAPKLLIYAAST----LQSGVPSRFSGS--GSGTDFSLTIN-SLQPEDFATYYCQ	89
3JWD_L	26	SQD-I-----S-TWLAWYQOKPGKAPKLLIYAAST----LQSGVPSRFSGS--GSGTDFSLTIN-SLQPEDFATYYCQ	89
3SKJ_L	26	SQS-I-----S-TWLAWYQOKPGKAPKLLIYKASN----LHTGVPSRFSGS--GSGTEFSLTIS-GLQPDDFATYYCQ	89
3SDY_L	27	SQS-V---SMN-Y---LAWFQOKPGQAPRLLIYGASR----RATGIPDRISGS--GSGTDFTLTIS-RLEPADFAVYYCQ	91
BAC01681	48	SQD-I-----S-NYLNWYQOKPGKAPKLLIYDASN----LETGVPSRFSGS--GSGTDFTLTIS-SLQPEDIATYYCQ	111
AAH62704	46	SQT-V---FSS-H---LAWYQORPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIT-RLEPEDFAVYFCQ	110
BAC01711	48	SQY-I-----S-RWLAWYQORPGKAPKLLIYAAAS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	111
BAC01677	48	SQS-I-----S-SWLAWYQOKPGKAPKLLIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYYCQ	111
3IDX_L	26	SQD-I-----R-NYLNWYQOKPGKAPKLLIYDASN----SETGVPSRFSGS--GSGRDFTLTIS-SLQPEDVATYYCQ	89
BAH03698	26	SQS-VFY-NSI-NKNFLAWYQORPGQPPELLIYWAST----RASGVPDFRFSGS--GSGTDFTLTIS-SLQAEDVAVYYCQ	95
3DVN_A	27	SQS-V-----S-SAVAWYQOKPGKAPKLLIYSASS----LYSGVPSRFSGS--RSGTDFTLTIS-SLQPEDFATYYCQ	90
0709220A	26	SQS-I-----S-RWLAWYQOKPGEAPKLLIYGASN----LESGVPSRFSGS--GSGTEFTLTIS-SLQSDDFATYYCQ	89
1PG7_L	26	SRD-I-----K-SYLNWYQOKPGKAPKLLIYATYS----LAEGVPSRFSGS--GSGTDYTLTIS-SLQPEDFATYYCL	89
BAC01767	48	SQS-V---SSS---YLAWYQOKPGQTPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ	112
BAC54152	26	SQS-I-----S-SWLAWYQOKPGKAPKLLIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYYCQ	89
1JPS_L	26	SRD-I-----K-SYLNWYQOKPGKAPKLLIYATYS----LAEGVPSRFSGS--GSGTDYTLTIS-SLQPEDFATYYCL	89
BAA82105	26	SQG-I-----S-SYLAWYQOKPGKAPKLLIYAAST----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYYCQ	89
AAC17968	24	SQY-I-----S-SYLAWYQOKPGKAPKLLIYAAST----LQSGVPSRFSGS--GSGTDFSLTIS-CLQSEDFATYYCQ	87
3G6J_E	26	SQD-V-----S-TAVAWYQOKPGKAPKLLIYSASF----LYSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	89
AAH73775	48	SQN-I-----N-NYLNWYQLKPGKAPNLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLRPDDFATYYCQ	111
3BDY_L	26	SQD-IPR-S-I-S-GYVAWYQOKPGKAPKLLIYWGSY----LYSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	93
1UJ3_A	26	SQD-I-----K-SFLSWYQOKPEKAPKSLIYATYS----LADGVPSRFSGS--GSGTDYTLTIS-SLQPEDFATYYCL	89
3ZTJ_H	26	SQS-VTF---N-YKNYLAWYQOKPGQPPELLIYWAST----RESGVPDFRFSGS--GSGTDFTLTIS-SLQAEDVAVYYCQ	93
BAC01705	48	SQS-I-----S-SWLAWYQOKPGKAPKLLIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYYCQ	111
ABU90670	26	SQD-I-----R-RNLNWYQOKPGKAPNLLIYNAST----LQTVPSRFSGS--VSGTDFTLTIS-SLQPEDIATYHCQ	89
3AAZ_B	26	SQS-IVH-SNG-H-TYLEWYLQKPGQSPRLLIYQVST----RFSGVPDFRFSGS--GSGTDFTLKIS-RVEAEDVGYYCF	94
AAS54981	24	SQS-V---SSG-S---LAWYQOKPGQAPRLLIYGAST----RATGIPDRFSGS--GSGTDFTLTIG-RLEPEDLAVYYCQ	88
ABU90544	26	SQG-I-----S-NSLNWYQOKPGKAPKLLIYDASN----LETGVPSRFTGS--GSGTDFTFISIS-SLQPEDIATYYCQ	89
3FZU_L	26	SQD-I-----R-YLNWYQOKPGKAPKLLIYVASS----LQSGVPSRFSGS--GSGTEFTLTVS-SLQPEDFATYYCL	89
3DVG_A	27	SQS-V-----S-SAVAWYQOKPGKAPKLLIYSARS----LYSGVPSRFSGS--RSGTDFTLTIS-SLQPEDFATYYCQ	90
3NFP_B	26	SSS-I-----SYMHWYQOKPGKAPKLLIYTTSN----LASGVPARFSGS--GSGTEFTLTIS-SLQPDDFATYYCH	88
BAC01722	48	SQS-V---SSS---YLAWYQOKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ	112
ABU90602	26	SQN-I-----D-NYLNWYQOKPGKAPKLLIYEASS----LRSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYYCQ	89
ABU90649	26	SQG-I-----S-SWLAWYQOKPEKAPKSLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIT-GLQPEDFATYYCQ	89
BAA82103	26	SQS-I-----G-PFLNWYQOKPGKAPKLLIYAASS----LQDGVPSRFSGS--GSATDFTLTIS-SLQPEDFATYYCQ	89

2VXQ_L	26	SQR-I-----N-TYLNWYQHKPGKAPKLLIYAASS----LQSGVPSRFSGS--GYGTDFTLTIS-SLQPEDFASYCQ	89
BAC01750	48	SQS-V---SSS---YLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFVYVYQ	112
BAC01741	48	SRD-I-----S-NYLNWYQKPGKAPKLLIYDASN----LETGVPSRFSGS--GSGTDFFTTIS-SLQPEDIATYYCQ	111
BAB18253	26	SQS-I-----S-SWLAWYQKPGKAPKLLIYKASG----LESGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYYCQ	89
AAH32451	46	SQS-L---SSS-Y---LAWYQKPGQAPRLLIYGVSS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYVYQ	110
BAC01762	48	SQG-I-----S-NSLAWYQKPGKAPKLLIYAASR----LESGVPSRFSGS--GSGTDYTLTIS-SLQPEDFATYYCQ	111
1HKL_L	26	SQE-I-N-G-----YLGWLQKPDGTIKRLIYAASST----LHSGVPKRFSGS--RSGSDYSLTIS-SLESEDFADYYCL	89
CAA09181	48	SQG-I-----S-NYLAWYQKPGKAPDLLIYAASST----LQSGVPSRFSGS--GSGTDFILTIS-RLQSEDFAIYYCQ	111
ACF34420	26	SQG-I-----S-NYLAWFQKPGKAPDLLIYAASST----LQSGVPSRFSGS--GSGTDFTLTIS-SLQVEDVATYYCQ	89
1BEY_L	26	SQN-I-----D-KYLNWYQKPGKAPKLLIYNTNN----LQTVPSRFSGS--GSGTDFFTTIS-SLQPEDIATYYCL	89
AAH16380	46	SQI-V---SSA-Y---LAWYQKPGQAPRLLIMFGSSS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYVYQ	110
BAC01697	48	SQS-V---SSS---YLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYVYQ	112
BAB18255	26	SQS-L-----N-NWLAWYQKPGKAPKLLIYKASS----LESGVPSRFSGS--ASGTEFTLTIS-SLQPDDFATYYCQ	89
2XRA_L	26	SQD-I-----R-NHLNWXQKPGKAPKLLIYDASN----LATGVPSRFSGS--GSGTDFFTTIS-SLQPEDLATYYCQ	89
ACF34428	26	SQS-I-----S-SWLAWYQKPGKAPKLLIYKAST----LESGVPSRFSGS--GSGTEFTLTIT-NLRPDDFATYYCQ	89
3JWO_L	26	SQD-I-----S-TWLAWYQKPGKAPKLLIYAASST----LQSGVPSRFSGS--GSGTDFSLTIN-SLQPEDFATYYCQ	89
BAJ52220	26	SQA-I-----E-DDLDWYQKPGKAPKRLVYGASN----LQRGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYYCL	89
BAC01678	48	SQG-I-----S-NYLAWFQKPGKVPKRLIYAASST----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYYCL	111
BAC01675	48	SQS-I-----S-TWLAWYQKPGKAPNLLIYQAST----LTSVPSRFSGS--GSGTEFTLTII-SLQPDDFATYYCQ	111
AAA70230	26	SQS-L-----S-GWVAWYQKPGKAPKLLIYKAST----LESGVPSRFSGS--GSGTVFALTIS-SLQPDDSATYYCQ	89
3QCT_L	26	GQS-LVH-ING-N-TYLHWYLQKPGQSPKLLIYKVSNN----LFSVGPDRFSGS--GSGTDFTLKIS-RVEAEDVGYYFC	94
3QOT_L	27	SQS-VLY-SSN-NKNYLAWYQKPGQPPKLLIYWAST----RESVGPDRFSGS--GSGTDFTLTIS-SLQAEDVAVYVYQ	96
BAC01734	48	SQS-LVH-SDG-N-TYLNWFQQRPGQSPRLLIYKVSNN----RDSVGPDRFSGS--GSGTDFTLKIS-RVEAEDVGYYVCM	116
BAC01699	48	SQS-V---SSS---YLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYVYQ	112
AAH22362	46	TQS-LVY-SDG-N-TYLNWFQQRPGQSPRLLIYKVSNN----RDSVGPDRFSGS--GSGTDFTLKIT-RVEAEDVGYYFCM	114
BAG62953	46	SQD-I---DD-D---MNWYQKPGQAPRLLIYQEATT----LVPGIPDRFSGS--GYGTDFTLTIN-NIESEDAAYYFCL	109
BAC01730	48	SQS-LVY-SDG-N-TYLNWFQQRPGQSPRLLIYKVSNN----RDSVGPDRFSGS--GSGTDFTLKIS-RVEAEDVGYYVCM	116
3M80_L	26	SQS-LLR-RDG-H-NDLEWYLQKPGQSPQLIYLGST----RASVGPDRFSGS--GSGTDFTLKII-RVEAEDAGTYVCM	94
2CMR_L	26	SEG-I-----Y-HWLAWYQKPGKAPKLLIYKASS----LASGAPSRFSGS--GSGTDFTLTIS-SLQPDDFATYYCQ	89
3QOS_L	26	SQS-VLY-SSN-NKNYLAWYQKPGQPPKLLIYWAST----RESVGPDRFSGS--GSGTDFTLTIS-SLQAEDVAVYVYQ	95
1AD0_A	26	SSS-V-----TYIHWYQKPLAPKSLIYATSN----LASVPSRFSGS--GSGTDYFTTIS-SLQPEDIATYYCQ	88
BAC01754	48	SQS-V---SSS---YLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYVYQ	112
BAJ52219	26	SQG-I-----R-NELAWYQKPGKAPKRLIQAASS----LHTGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYHCL	89
3UTZ_D	26	SQS-IVH-SNG-N-TFLEWYLQKPGQSPKLLIYKVSNN----RFSVGPDRFSGS--GSGTDFTLKIS-RVEAEDLVYYVCF	94
3TCL_L	26	SQS-----VH-S-RYFAWYQKPGQPPRLLIYGGST----RATGIPNRFSG--GSGTQFTLTVN-RLEAEDFAVYVYQ	90
BAF48992	26	SQG-I-----S-RWLAWYQKPGKAPKLLIYAASST----LHTGVPSRFSGS--GSGTDFALTIS-SLQPEDFATYYCQ	89
AAH05332	48	SQD-I-----S-NYLAWFQKPGKAPKSLIYGASS----LQSGVQSKFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	111
1DFB_L	26	SQS-I-----S-RWLAWYQKPGKVPKLLIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYYCQ	89
ABU90712	26	SQS-I-----S-YSLNWXQKPGNAPKFLIYASST----LQTVPARFSGS--GSETDFNLTII-SLQPEDFATYYCL	89
BAC01698	48	SQS-V---SSS---YLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYVYQ	112
BAC01680	48	SQD-I-----S-NYLNWYQKPGKAPKLLIYDASN----LETGVPSRFSGS--GSGTDFFTTIS-SLQPEDIATYYCQ	111
3FO0_L	26	SQS-IVH-SNG-N-TYLEWYLQKPGQSPKLLIYKVSNN----RFSVGPDRFSGS--GSGTDFTLKIN-RVEAEDLVYYVCF	94
3U46_L	26	SQN-----VH-P-RYFAWYQKRGQSPRLLIHSGST----RAAGIADRFSGG--GSGMHFTLTIT-RVEPEDFAVYVYQ	90
3FO2_L	26	SQS-IVH-SNG-N-TYLQWYLQKPGQSPKLLIYKVSNN----RFSVGPDRFSGS--GSGTDFTLKIN-RVEAEDLVYYVCF	94
3S34_L	26	SQG-I-----D-NWLWYQKPGKAPKLLIYDASN----LDTGVPSRFSGS--GSGTYFTLTIS-SLQAEDFAVYVYQ	89
BAC01753	48	SQS-V---SSS---YLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYVYQ	112
1GAF_L	26	SQE-I-N-G-----YLGWLQKPDGTIKRLIYAASST----LHSGVPKRFSGS--RSGSDYSLTIS-SLESEDFADYYCL	89

BAC01682	48	SQS-LLH-TNG-V-NFLDWYLQKPGQSPKLLIYLASH----	RASGVDRFSGS--GSGTDFTLRIS-RVEAEDVGIYYCM	116
1IQD_A	25	SQS-F---SSS-Y---LAWYQKPGQAPRLLIYGAST----	RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ	89
3FO1_L	26	SQS-IVH-SNG-N-TYLAWYLQKPGQSPKLLIYKVSN----	RFSGVDRFSGS--GSGTDFTLKIN-RVEAEDLGVYYCF	94
BAC01740	48	SQS-LLH-SDG-K-TYLYWYLQKPGQPPQLLIYEVSN----	RFSGVDRFSGS--GSGTDFTLKIS-RVEAEDVGVYYCM	116
BAC01708	48	SQS-VLY-SSN-NKNYLAWYQKPGQPPKLLIYWAST----	RESGVDRFSGS--GSGTDFTLTIS-SLQAEDVAVYYCQ	117
BAC01715	48	SQD-I----DD-D---MNWYQKPGQAAFI IQEATT----	LVPGISPRFSGS--GYGDFTLTIN-NIESEDAAYYFCL	111
3U1S_L	46	SHS-LQH-STG-A-NYLAWYLQRPQTPRLLIHLATH----	RASGVDRFSGS--GSGTDFTLKIS-RVESDDVGTYYCM	114
BAC01674	48	SQS-I-----S-SWLAWYQRKPGKAPKLLIYKASS----	LESGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYYCQ	111
BAC01688	48	SQS-VLY-SSN-NKNYLAWYQKPGQPPKLLIYWAST----	RESGVDRFSGS--GSGTDFTLTIS-SLQAEDVAVYYCQ	117
BAB18263	26	SQS-V---SSS-Q---FAWYQKPGQAPRLLICGASS----	RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYHCQ	90
BAC01719	48	SQS-LVY-SSG-S-THLSWFHQRPGRPRLLINFSVN----	RDSGVDRFSGS--GSGTDFTLQIS-RVEAEDVGAYYCM	116
BAC01716	48	SQD-I----DD-D---MNWYQKPGQAAFI IQEATT----	LVPGISPRFSGS--GYGDFTLTIN-NIESEDAAYYFCL	111
BAC01692	48	SES-V---SSS----YLAWYQKLGQAPRLLIYGAFN----	RAAGIPDRFTGS--GSGTDFSLSIS-RLEPEDVAVYYCQ	112
ABU90647	26	SQD-I-----S-NYLNWYQKLGKAPSLLIYDAAD----	LETGVSLRFNGS--GSGTDFFTTIS-SLQPEDIAIYYCQ	89
AAA87674	26	SQS-I-----S-PWLPWYQKPGKAPKLLIYKASS----	LESGVPSRFSGS--GSGTEFTLTIT-SLQPDDFATYFCQ	89
BAC01746	48	SQS-V---SSS----YLAWYQKPGQAPRLLIYGASS----	RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ	112
A23746	26	SQS-V---SSN-Y---LAWYQKPGQAPRLLIYDASS----	RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYGQ	90
BAC01733	48	SQS-LLH-SNG-Y-NYLDWYLQKPGQSPQLLIYLGSN----	RASGVDRFSGS--GSGTDFTLKIS-RVEAEDVGVYYCM	116
BAC85236	46	SQS-V---SST-S---LAWYQKPGQAPRLLIYAASS----	RATGVDRFSGS--GSATDFTLTIS-RLEPEDFAVYHCQ	110
AAC02819	26	SQS-V---SNG-Q---LTWYQKPGQAPRLLIYGASS----	RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCH	90
1S3K_L	26	SQR-IVH-SNG-N-TYLEWYQTPGKAPKLLIYKVSN----	RFSGVPSRFSGS--GSGTDFFTTIS-SLQPEDIATYYCF	94
1CLY_L	26	SQI-IVH-NNG-N-TYLEWYLQKPGQSPQLLIYKVSN----	RFSGVDRFSGS--GSGTDFTLKIS-RVEAEDLGVYYCF	94
BAC01695	48	SQS-V---SSS----YLAWYQKPGQAPRLLIYGASS----	RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ	112
ACF34415	26	SQD-I-----S-NYLNWFQKPGKAPNLLIYDASN----	LETGVPSRFSGS--GSGTNFTTITH-SLQPEDIATYYCQ	89
BAC01739	48	SQS-VLY-SSN-NKNYLAWYQKPGQPPKLLIYWAST----	RESGVDRFSGS--GSGTDFTLTIS-SLQAEDVAVYYCQ	117
4D9Q_D	26	STD-I-----D-DDMNWYQKPGKVPKLLISGGNT----	LRPGVPSRFSGS--GSGTDFTLTIS-SLQPEDVATYYCL	89
BAC01765	48	SQS-LVY-SDG-N-TYLNWFQRPQSPRLLIYKVSN----	WDSGVDRFSGS--GSGTDFALKIS-RVEAEDVGVYYCM	116
ABU90713	26	SQT-VLY-SSN-NKNYLAWYQKPGQPPKLLIYWAST----	RESGVDRFSGS--GSGTDFTLTIS-SLQAEDVAVYSCQ	95
BAA82100	26	SES-I-----D-GWLAWYQKPGKPPKLLIYKASN----	LHSGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYHCQ	89
BAC01691	48	SQS-I---SSS----YLAWYQKAGQAPRLLMYGASR----	RATGIPDRFSGS--GSGTEFTLTIT-RLEPEDFAVYYCQ	112
BAC01729	48	SQS-LVH-SDG-N-TYLNWFQRPQSPRLLIYKVSN----	RDSGVDRFSGS--GSGTDFTLKIS-RVEAEDVGVYYCM	116
1AD9_L	26	SKS-LLH-SNG-D-TFLYWFQKPGKAPKLLMYRMSN----	LASGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYYCM	94
4D9R_L	26	STD-I-----D-DDMNWYQKPGKVPKLLISGGNT----	LRPGVPSRFSGS--GSGTDFTLTIS-SLQPEDVATYYCL	89
ABU90644	26	SQY-I-----S-SYLNWYQKPGQAPKLLVYGASR----	FQSGVPSNFSGS--GAGTGFTLTIS-SLQPEHFATYYCQ	89
BAC01690	48	SQS-I---SSS----HLAWYQKPGQAPRLVIYGASN----	RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYHCQ	112
BAC01763	48	SQS-LLH-SNG-Y-NYLDWYLQKPGQSPQLLIYLGSN----	RASGVDRFSGS--GSGTDFTLKIS-RVEAEDVGVYYCM	116
1TJG_L	26	SQG-V-----T-SALAWYRQKPGSPQLLIYDASS----	LESGVPSRFSGS--GSGTEFTLTIS-TLRPEDFATYYCQ	89
BAC01700	48	SQS-VLY-SSN-NNNYLAWYQKPGQPPKLLIYWAST----	RESGVDRFSGS--GSGTDFTLTIS-SLQAEDVAVYYCQ	117
3LEV_L	26	SQG-V-----T-SALAWYRQKPGSPQLLIYDASS----	LESGVPSRFSGS--GSGTEFTLTIS-TLRPEDFATYYCQ	89
ACF34429	26	SNQ-VLY-KSN-NKNYLAWYQKPGQPPRLLMYWAST----	RESGVSDRFSGS--GSGTDFTLTIS-SLQAEDVAVYYCH	95
1AXS_L	26	SQD-I-N-S-----YLNWFQKPGKSPKTLIYRTNR----	LVDGVPSRFSGS--GSGQDYSLTIS-SLEYEDMGIYYCL	89
3OAY_K	26	SQS-I-----E-TWLAWYQKPGKAPKLLIYKAST----	LKTGVPSRFSGS--GSGTEFTLTIS-GLQFDDFATYHCQ	89
1ZLS_L	25	SQS-I-----E-TWLAWYQKPGKAPKLLIYKAST----	LKTGVPSRFSGS--GSGTEFTLTIS-GLQFDDFATYHCQ	88
BAC01720	48	SQS-LVY-SSG-S-THLSWFHQRPGRPRLLINFSVN----	RDSGVDRFSGS--GSGTDFTLQIS-RVEAEDVGVYYCM	116
ABU90604	26	SQD-I-----N-NYLNWYQHKPGKAPNLLIYDTAN----	LITGVPSRFSGS--GSGTNFTTIS-GLQPDDFATYYCQ	89
BAC01694	48	SHY-V---SSS----YLAWYQKPGQAPRLLIYDAST----	RAAGIPDRFSGG--GSGTDFTLTIS-RLESEDFAIYYCQ	112
BAC01685	48	SQS-PVH-SVG-T-TALSWFQRPQSPRLLYNVSN----	RDSGVDRFSGS--GSGTDFTLQIS-RVEAEDVGVYYCM	116



2AJ3_A	25	SQD-I-----Q-KFLAWYQLTPGDAPKLLMYSAST----LQSGVPSRFSGS--GSGTEFTLTIS--GLQPEDFATYYCQ	88
BAC01718	48	SQS-LVD-SNG-R-IYLAWFQQRPGQSPRRLIYPVSK----RDSGVPDRFSGS--GSGTEFTLKIS-RVEAEDVGYYCM	116
1BBJ_L	26	SEN-I-Y-S-----NLAWYQKQKSPQLLVYAATN----LADGVPSRFSGS--GSGTQYSLKIN-SLQSEDFGSYYCQ	89
1OM3_L	25	SQS-I-----E-TWLAWYQKPKGKAPKLLIYKAST----LKTGVPSRFSGS--GSGTEFTLTIS--GLQFDDFATYHCQ	88
3INU_L	26	SQS-VLY-SSN-NKSYLAWYQKPGQPPKLLIYWAST----RESGVPDRFSGS--GSGTDFTLTIS--SLQAEDVAVYYCQ	95
BAC01764	48	SQS-LLH-SNG-Y-NYLDWYLQKPGQSPQLLIYLGSN----RASGVPDRFSGS--GSGTDFTLKIS-RVEAEDVGYYCM	116
ACF34430	26	SQS-VLF-SFN-NKNYLSWYQKSGQPPKLLIYWAST----RESGVPDRFNGS--GSGTDFTLTIN--SLQAEDVAVYHCH	95
ABU90648	26	SQN-VFY-SSN-NKNYVAWYQKPGQPPRLLIYRAST----RESGVPDRFSGG--GSGTDFTLTIS--SLQAEDVAVYFCQ	95
ABU90637	26	SQN-LLY-SSN-NRNYLAWYQQRPGQPPKLLIDWAST----RESGVPDRFSGS--GSGTHFTLTIS--SLQAGDVAVYYCQ	95
BAC01687	48	SQS-LVY-SDG-N-TYLNWFQQRPGQSPRRLIYKVSN----RDSGVPDRFSGS--GSGTDFTLKIS-RVEAEDVGYYCM	116
BAC01686	48	SQS-LLH-SNG-N-NYLDWYLQKPGHSPQLLIYLGSN----RASGVPDRFSGS--GSGTEYTLKIS-RVEAEDVGYYCM	116
BAF49281	26	SQS-LVL-SDG-N-TYLSWFQQRPGQSPRRLIYKVSN----RNSGVPDRFIGS--GSGTDFTLKIS-RVEAEDVGYYCM	94
2F5A_L	26	SQG-V-----T-SALAWYRQKPGSPPQLLIYDASS----LESGVPSRFSGS--GSGTEFTLTIS--TLRPEDFATYYCQ	89
3D0L_A	26	SQG-V-----T-SALAWYRQKPGSPPQLLIYDASS----LESGVPSRFSGS--GSGTEFTLTIS--TLRPEDFATYYCQ	89
BAC01693	48	SQS-V---DST---YLGWYQKPGQAPRLLIYGASN----RATGIPDRFSGG--GSGADFTLTIS--RLEPEDFAVYFCQ	112
2F5B_L	26	SQG-V-----T-SALAWYRQKPGSPPQLLIYDASS----LESGVPSRFSGS--GSGTEFTLTIS--TLRPEDFATYYCQ	89
ACF34421	26	SHD-I-----N-TYLGWLQQTTPGKAPKSLIYAAST----LQSGVPSRFSGG--GSGTHFTLNIS--SLQPEDFATFYCQ	89
BAC01742	48	SQS-VLY-SSN-NKNYLAWYQKPGQPPKLLIYWAST----RESGVPDRFSGS--GSGTDFTLTIS--SLQAEDVAVYYCQ	117
3U0T_C	26	SQS-LLY-SDA-K-TYLNWFQQRPGQSPRRLIYQISR----LDPGVPDRFSGS--GSGTDFTLKIS-RVEAEDVGYYCL	94
3GKW_L	26	SQN-IVH-SNG-N-TYLDWYQQTTPGKAPKLLIYKVSN----RFSGVPDRFSGS--GSGTDFFTTIS--SLQPEDIATYYCF	94
3CSY_B	26	SQS-VLY-SSN-NKSYLAWYQKPGQPPKLLIYWAST----RESGVPDRFSGS--GSGTDFTLTIS--SLQAEDVAVYYCQ	95
BAH03699	26	SQS-LLH-SNG-F-NFLDWYLRKPGQSPQLLIYLGSN----RASGVPDRFSGS--GSGTDFTLKIS-RVEAEDIGVYYCM	94
3QEH_B	26	SQS-LLH-TNG-F-QYLDWYLQKPGQSPQLLIYLGSN----RATGVPHRFSGS--GSGTEFTLKIS-RVEAEDVGYYCM	94
751419A	26	SQD-II-----KYLNWYQQTTPGKAPKLLIYEASN----LQAGVPSRFSGS--GSGTDYFTTIS--SLQPEDIATYYCQ	89
AAA87675	26	GHN-I-----T-NFLSWYQKPKGAPTLLIYAVSN----LQDGVPSRFSGS--GSGAEFTLTIS--SLQPEDFATYYCQ	89
BAC01683	48	SQS-LLH-SNG-Y-NYSDWYLQKPGQSPQLLIYLGSS----RASGVPDRFSGS--GSGTDFTLKIS-RVEAEDVGYYCM	116
302V_L	26	SQS-LVH-SNG-N-TYLNHWYLQKPGQSPKFLIYKVSN----RFSGVPDRFSGS--GSGTDFILKIS-RVEAEDLGVYFCS	94
BAC01703	48	SQS-VLY-SSN-NKNCLAWYQKPGQPPKLLIYWAST----RESGVPDRIRGS--GSGTDFTLTIS--SLQAEDVAVYYCQ	117
BAC01714	48	SQS-VLY-SSN-NKNYLAWYQKPGQPPKLLIYWAST----RESGVPDRFSGS--GSGTDFTLTIS--SLQAEDVAVYYCQ	117
BAC01731	48	SQS-VLY-SSN-NKNYLAWYQKPGQPPKLLIYWAST----RESGVPDRFSGS--GSGTDFTLTIS--SLQAEDVAVYYCQ	117
751423A	26	SQS-VLY-SSN-SKNYLAWYQKPGQPPKLLIYWAST----RESGVPDRFSGS--GSGTDFTLTIS--SLQAEDVAVYYCQ	95
BAC01751	48	SQS-VLY-SSN-NKNYLAWYQKPGQPPKLLIYWAST----RESGVPDRFSGS--GSGTDFTLTIS--SLQAEDVAVYYCQ	117
1U8K_A	26	SQG-V-----T-SALAWYRQKPGSPPQLLIYDASS----LESGVPSRFSGS--GSGTEFTLTIS--TLRPEDFATYYCQ	89
BAC04905	46	SQS-LLH-SNG-Y-NYDWWYLQKPGQSPQLLIPLSSN----RASGVPDRFSGS--GSGTDFILKIS-RVEAEDVGYYFCM	114
BAC76878	26	SQS-VLY-SSN-KKNYLAWYQKPGQPPKLLIYRAST----RESGVPDRFSGS--GSETDFTLTIS--SLQPEDVAVYYCQ	95
BAC01761	48	SQS-LVY-SDG-N-TYLNWFQQRPGQSPRRLIYKVSN----WDSGVPDRFSGS--GSGTDFTLKIS-RVEAEDVGYYCM	116
BAC01717	48	SQS-LLH-SNG-F-TYLEWYLQKPGQSPQLLIYLGSN----RASGVPDRFSGS--GSGTDFTLKIS-SVEAEDVGYYCM	116
BAC01745	48	SQD-I----DD-D---MNWYQKPGEEAAFI IQEATT----LVPGISPRFSGS--GYGTDFTLTIN--NIESEDAAYYFCL	111
AAA70229	26	SQD-I-----N-YFLNWYQKPGRAPKLLIYDASN----LEKGVPSRFSGS--GSGTHFTTIS--SLQPEDFATYYCQ	89
BAC05011	48	SHD-I-----E-SFLNWYQKPKGAPKRLIHDGSR----SEKGVPRRFSGS--GFGTDFSLFIN--NLQPEDVATYYCQ	111
BAC01732	48	SQS-LLH-SNG-Y-NYLDWYLQKPGQSPQLLIYLGSN----RASGVPDRFSGS--GSGTDFTLKIS-RVEAEDVGYYCM	116
BAC01721	48	SQS-LLH-MNG-A-NYLDWYLQKPGQSPQLLIYLGSN----RASGVPDRFSGS--GSETDFTLKIT--RVEADDDVGYYCM	116
BAA82102	26	SQS-ILY-SSN-SKNYLAWYQKPGQPPKLLIYWAST----RQSGVPDRFSGS--GSGTNFTLTIS--NLQTEDVAVYYCQ	95
BAC85234	46	NQT-IFYKSN-K-TYLAWYQKPSQPPKLLIYWAST----RESGVPDRFSGS--ASGTDFTLTIA--TLQAEDAAYYFCQ	115
BAC01710	48	SQD-I----DD-D---VNXYQKPGEEAAVFLILEATT----LVPGIPPRFSGS--GYGTDFTLTIN--NIESEDAAYYFCL	111
BAC01712	48	SQD-I----DD-D---VNWYQRKPGEEAAFI IQEATT----LVPGIPPRFSGS--GYGTDFTLTIN--NIESEDAAYYFCL	111
BAE94187	26	SQS-LVD-TNG-N-TYLIWFHQQRPGQSPRRLIYQVSK----RDSGVPDRFSGS--GSGTDFTLKIS-RVEAEDVGYYFCM	94

AAD15786	26	SQS-I---SSN-Y--YLAWFQKPGQAPRLLMLSTSY----MTSTFPDRFSGS--GSGTDFTLTIS--RRQSEDVAVYYVQ	91
2QR0_A	26	SQS-V-----S-SAVAWYQKPGKAPKLLIYSASS----LYSGVPSRFSGS--RSGTDFTLTIS-SLQPEDFATYYCQ	89
2QSC_L	26	SQD-I-----S-NYLNWYQHKPGKAPKLLIYTASN----LETGVPSRFSGG--GSGTHFSFTIT-SLQPEDAATYFCQ	89
AAM46658	18	SQG-I-----S-SWLAWYQKPGKAPKLLIYVASR----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	81
3SE8_L	26	SQG-----GN-A---MTWYQKRRGQVPRLLIYDTSR----RASGVDPDRFVGS--GSGTDFTLTIN-KLDREDFAVYYCQ	88
BAC01689	48	SQS-S---SSA----FLAWLQKPGQAPRLLIYGSSST----RATGIPDRFSGS--GSGADFTLTIS-RLEPEDFATYYCQ	112
AAB50880	26	SQS-LLR-RDG-H-NDLEWYLQKPGQSPQLLIYLGST----RASGVDPDRFSGS--GSGTDFTLKII-RVEAEDAGTYBYM	94
ABU90586	26	TQG-I-----H-TYLNWYQKPGKAPKLLIYDASN----LEAGVPSFSGS--GSGTDFIFTIS-SLQPEDIGTYCQ	89
AAR88380	13	SQS-I-----S-NWLAWYQKPGRAPKLLMYKASS----LKSGVPSRFSGS--GSGTEFTLTIS-SLQSDDFATYYCQ	76
AAR88378	13	SQS-I-----S-SYLNWYQKPGKVPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	76
BAC01713	48	SQS-VLY-SSN-NKSYLTWYQKPGQPPRLLIYWAST----RKSGVDRFSAS--RTGTDFTLTIS-SLQAEDEVAVYYCQ	117
BAF48996	24	SQS-I-----S-SYLNWYQKPGKAPKLLIYAASS----LQSGVSSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	87
1HZH_L	26	SHS-----IR-S-RRVAVYQHKPGQAPRLLIYHGVSN----RASGISDRFSGS--GSGTDFTLTIT-RVEPEDFALYYCQ	90
1FH5_L	26	SQS-ISN--N-----LHWYQKSHESPRLLIKYASQ----SISGIPSRFSGS--GSGTDFTLTIN-SVETEDFGMYCQ	89
JE0241	26	SQS-VLY---N-SKNFLAWYQKPGQ--PKLLI-WANV----RESGVDPDRFRGS--GVGTDFTLTIS-NLQAEDEVAVYYCQ	91
AAT44350	15	SQS-V---SSS-Y---LAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFATYYCQ	79
AAT44349	15	SQS-I---TNS-Y---LAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFATYYCQ	79
AAT44348	15	SQS-V---ISS-Y---LAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFATYYCQ	79
3SE9_L	26	ASY-----GH-----MTWYQKPGQPPLLIYFATSK----RASGIPDRFSGS--QFGKYTLTIT-RMEPEDFARYCQ	87
AAR88374	13	SQN-I-----N-NYLNWYQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	76
3U7W_L	26	SQS-----GS-----LAWYQQRPGQAPRLLIYSGST----RAAGIPDRFSGS--RWGADYNLSIS-NLESGDFGVYYCQ	87
1MIM_L	26	SSS-R-S-----YMQWYQKPGTSPKRWIYDTSK----LASGVPARFSGS--GSGTSYSLTIS-SMEAEDAATYYCH	88
AAM46656	18	SQS-LVY-SDG-N-TYLNWFQQRPGQSPRLLIYKVSN----WDSGVDPDRFSGS--GSGTDFTLKIS-RVEAEDVGVYYCM	86
AAM46662	18	SQS-LLH-SNG-Y-NYLDWYLQKPGQSPQLLIYLGSN----RASGVDPDRFSGS--GSGTDFTLKIS-RVEAEDVGVYYCM	86
1OPG_L	26	SQS-ISN--N-----LHWYQKSHESPRLLIKYASQ----SISGIPSRFSGS--GSGTDFTLTIN-SVETEDFGMYFCQ	89
2XZA_L	25	SSS-NI---GN---NYVSWYQQLPGTAPKLLIYDNNK----RPSGIPDRFSGS--KSGTSATLGIT-GLQTGDEADYYCG	90
BAC01672	48	SQY-I-----N-NYLNWYLQKPGSAPKLLIYGASS----LQSGVSSRFSGS--GSGPDFTLTIS-SLQPEDFGTYCQ	111
AAX14398	27	SQG-I-----S-SWLAWYQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	90
AAF86917	46	SQS-I---SGS-Y---LAWYQKPGQAPRLLIYGASS----RATGIPDRFSGA--GSGTDFTLTIS-RLEPEDFATYYCQ	110
3NPS_C	23	SSS-NI---GS---NYVSWYQKPGTAPKLLIYDNNQ----RPSGVDPDRFSGS--KSGTSAVLAIT-GLQSEDEADYYCQ	88
3RPI_L	26	NGY-L-----N-WYQRRGKAPKLLIYDGSK----LERGVPARFSGR--RWQOEYNLTIN-NLQPEDVATYFCQ	85
CAA09185	48	SQS-I-----SSYLNWYQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFASYCQ	111
3KDM_L	25	TSS-DV---GG-Y-NYVSWYQHPGKAPKLLIYGVTN----RPSGVSNRFSGS--KSGNTASLTIS-GLQAGDEADYYCS	91
CAA09183	48	SQS-V-----SRWLAWFQKPGKAPKLLIYEAST----LETGVPSRFSGS--GSGTEFTLTIS-SLQPDLLATYYCQ	111
3CFK_L	25	SSG-AV---TT-S-NYATWVQEKPDHLFTGLIGGTNK----RAPGVPARFSGS--LIGDRAALTIT-GAQTEDEAIYFCA	91
ADX65732	23	NQS-VST-N-----LAWYQKPGQAPRLLIFGAST----RATGIPAGFSGS--GSGTEFTLTIS-SLQSEDFAVYYCH	86
ADK12723	26	SQS-LVD-TNG-N-TYLIWFHQRPQSPRLLIYQVSK----RDSGVDPDRFSGS--GSGTDFTLKIS-RVEAEDVGVYFCM	94
ADX65966	23	SQS-VSS-N-----LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYYCQ	86
3DIF_A	26	SQD-VST--A-----VAWFQKPGQSPKLLIYSASY----RYTGVDPDRFTGS--GSGTDFFTTIS-SVQAEDLAVYYCQ	89
1IKF_L	26	SQD-IST--Y-----LNWYQKPDGTVKLLIFYTSR----LRSGVPSRFSGS--GSGTDYSLTIS-NLEQEDIATYFCQ	89
ADX66114	15	SQS-VSS-N-----LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYYCQ	78
3DGG_A	26	SKS-VST--SG--YSYMHWYQKPGQPPKLLIYLASN----LESGVPARFSGS--GSGTDFTLNIH-PVEEEDAATYYCQ	93
ADX65746	23	TQN-I-----NSYLNWYQKSGKAPKLLIYAASN----LESGVPRRISGS--GSGTDFTLTIN-NLQPEDLGTYYCQ	86
ADX66208	14	SQS-VSS-Y-----LAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYYCQ	77
AAA59000	1	-----LQPEDFATYYCQ	12
ADX65974	23	SQG-IRN-D-----LGWYQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYYCL	86
2ZKH_L	26	SSS-VS---Y-----MYWFQKPGTSPKLIWYSTSN----LASGVPARFRGS--GSGTSYSLTIS-RMEAEDAATYYCQ	88

1HOD_A	26	SES-VDN--YG--ISFMSWFQKPGQPKLLIYAASN----QSGVPARFSGS--GSGTDFSLNIH-PMEEDDTAMYFCQ	93
1KFA_L	26	SQSLVHS--NG--NTYLHWYLQKPGQSPKLLIYKVS----RFSGFPPDRFSGS--GSGTDFTLKIS-RVEAEDLGVYFCS	94
ADX65961	23	SQS-ISS-W-----LAWYQKPGKAPKLLIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYYCQ	86
AAH92455	48	SQD-I-----RKYLWNWYQKPGQAPKLLIYDASD----LETGVPSRFSGS--GFGTDFSLNIS-SLQTEDVATYYCQ	111
ADX66097	15	SQS-ISN-Y-----LNWYQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	78
2FEC_O	26	SSS-VS---Y-----IHWYQKSGTSPKRWIYDTSK----LTSGVPVRFSGS--GSGTSYSLTIN-TMEEDAATYYCQ	88
ADX66082	15	SQG-IRN-D-----LGWYQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYYCL	78
AAZ24201		-----	
ADX65991	23	SQS-VSS-S-----YLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ	87
ADX66171	9	SQS-LGD-S-----LAWYQKPGQAPRLLIYDVS----RATGIPARFSGS--GSGTDFTLTIS-SLELDDFAVYYCQ	72
ADX66166	9	SQS-ISS-W-----LAWYQKPGKAPKIMIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYYCQ	72
ADX65987	23	SES-ISS-S-----YLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ	87
S52059	1	-----MR-----RVFVQQ	8
ADX66104	15	SQT-INN-Y-----LAWYQKPGQAPRLLIYDSSN----RATGVPARFSGS--GSGTDFILTIS-SLEPEDFAVYYCQ	78
ADX66080	14	SQS-ISS-H-----LNWYHQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFALTIR-SLQPEDFATYYCQ	77
ADX66193	14	SQS-VSS-Y-----LAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYYCQ	77
ADX66036	15	SQS-VSS-D-----LAWYQKPGQAPRLLIYAAS----RATGIPARFSGS--ESGTEFTLTIS-SLQSEDALAYFCQ	78
ADX66173	15	SQS-VSS-S-----HLAWYHQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ	79
ADX66155	12	SQS-INT-W-----LAWYQKPREAPKLLIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYYCQ	75
ADX66088	14	SQS-VSS-S-----YLAWYQKPGQAPRLLIYGASN----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ	78
ADX66086	15	SQS-ISS-W-----LAWYQKPGKAPKLLIYKASS----LEDGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYYCQ	78
ADX65970	41	SQG-ISS-Y-----LAWYQKPGKAPKLLIYAAS----LQSGVPSRFSGS--GSGTDFTLTIS-CLQSEDFATYYCQ	104
ADX65901	14	SQS-VSS-S-----LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFATYYCQ	77
ADX66185	15	SQS-VSS-S-----YLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ	79
ADX66057	13	SQT-IGI-N-----LAWYQKPGQAPRLLISSAST----RATGIPARFNGS--GSGTEFTLTIS-SLQSEDFAIYSCQ	76
ADX66195	15	SQS-ISR-Y-----LNWYQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	78
ADX66212	12	SQG-ISN-S-----LAWYQKPGKAPKLLIYAASR----LESGVPSRFSGS--GSGTDYTLTIS-SLQPEDFATYYCQ	75
ADX66109	15	SQS-ISY-W-----LAWYQKPGKAPKLLIYKASN----LQSGVPSRSGS--GSGTEFTLTIS-SLQPDDFATYSCQ	78
ADX66187	15	SQS-ISS-W-----LAWYQKPGNPKLLIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLQPDDIATYYCQ	78
PN0445	36	SQS-IGT--S-----IHWYQRTNGPPRLLIYKASE----SIGIPSRFSGS--GSGTDFTLNIS-SVESEDIADYYCQ	99
AAF05692	26	SQS-ISS-Y-----LNWYQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	89
ADX66188	11	SQG-IRN-D-----LGWYQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYYCL	74
ADX65923	12	SQS-VSS-Y-----FAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYYCQ	75
ADX66002	15	SRD-IIN-Y-----LAWYQKPGQAPRLLIYDTSN----RAPGTPARFSGS--GSGTDFTLTIS-SLEPEDFAVYYCQ	78
AAF05691	26	SQG-ISS-A-----LAWYQKPGKAPKFLMYAAS----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFGTYCQ	89
ADX66191	15	SQS-VSS-S-----YLAWYQKPGQAPRLLIYGASS----RATGIPDSFSGS--GSGTDFTLTIS-GLEPEDFAVYYCQ	79
ADX66139	13	SQS-VSS-S-----YLAWYQKPGQAPRLLIYGASK----RAAGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ	77
ADX65981	23	SQS-LLH-SN--GYNLDWYLQKPGQSPQLLIYLSN----RASGVDRFSGG--GSGTDFTLKIS-RVEAEDVGVYYCM	91
ADX65903	15	SQS-IGI-Y-----LNWYQRPKAPNLLIYAASS----LQSGVPSRFSGS--GSGTDFALTIS-SLQPEDFATYYCQ	78
ADX66075	14	SQV-ISR-W-----LAWYQKPGKAPKALIYKVA----LETGVPSRFSGY--GSGTEFALTIS-SLHPDDFATYYCQ	77
2XTJ_C		-----	
ADX65843	14	SQS-VSS-N-----LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLESADFAVYYCQ	77
ADX66023	15	SQS-ISN-Y-----LAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPGDFAVYYCQ	78
P01834		-----	
ADX66005	15	SQT-IRT-W-----LAWYQVPGKAPKLLIYRAST----LNSRVPSRFSGS--GSGTEFTLTIS-SLQPEDVATYYCQ	78
ADX66051	13	SQG-IRN-D-----LGWYQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCL	76
ADX66168	1	----VNT-W-----LAWYQKPGKAPQLLIYKAST----LASGVPSTFSGS--GSGTEFTLTIG-SLQPEDFATYYCQ	61

ADX65997	15	SQS-ISI-W-----LAWYQKPGKAPKLLMYKASS----LESGVPSRFSGS--ESGTEFTLTIS-NLQPDDFATYYCQ	78
AAA52924	24	SQG-ISN-Y-----LAWYQKPGKVPKLLIYAASST----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDVATYYCQ	87
AAD29610		-----	
CAC20459		-----	
ADX66045	7	SQS-VSS-D-----LAWYQKPGQAPRLLIYAASST----RATGIPARFSGS--ESGTEFTLTIS-SLQSEDLALYFCQ	70
ADX66043	9	SQS-VSS-D-----LAWYQKPGQAPRLLIYAASST----RATGIPARFSGS--ESGTEFTLTIS-SLQSEDLALYFCQ	72
ADX65887	14	SQS-VSN-K-----LAWYQKPGQSPRLLIYDFTST----RATGVVPRFTGG--GSGTDFTLTIS-SLQSEDFAVYYCQ	77
ADX66210	8	SQS-ISS-W-----LAWYQKPGKAPKLLIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYYCQ	71
AAA52934	24	SQS-VIS-N-----YLAWYQKPGQAPRLLIYGVSN----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYSCQ	88
ADX65883	10	SQS-ISN-N-----LNWYQKPGKAPKLLIYGAST----LESGVPSRFSGS--GSGTDFTLTVS-SLQPEDLATYHCQ	73
ADX66007	15	SQT-IGR-Y-----LNWYQEPGAAPRLLIYDASS----VQRGVPSRFSGS--SSGTDFTLAIT-SLQPEDSATYWCQ	78
ADX66146	13	SHG-IGN-F-----LAWYQKPGKAPKLLITAST----LQLGVPSRFSGS--ASGTDFTLTIS-GLQPEDVATYYCQ	76
ADX65872	14	SQG-IMN-Y-----LAWYQQRPGKAPQLLISAASST----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDVGTYYCQ	77
ADX66066	7	SQR-VTS-N-----VAWYQHKPGQAPRLLIYASST----RATGIPARFTGS--GSGTEFTLTIR-SLQSEDFAVYHCQ	70
ADX66064	14	SQS-VRS-N-----LAWYQKPGQAPRLLIYGVSS----RATGIPARFTGS--GSGTEFTLTIS-SLRSDDFGVYYCH	77
ADX66047	15	SQS-ISF-F-----LAWYQKPGKAPNLLIYKASS----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPDDSATYYCQ	78
ADX66098	14	SQS-MTT-Y-----LAWYQKPGQAPRLLIYDTSI----RATGIPARFSAS--GSGTDFTLTIS-SLEPEDFAVYYCQ	77
AAA58922		-----	
ADX65921	14	SQS-VSS-S-----YLAWYQKPGQAPRLLIYTASS----RATGIPDRFSGS--GSGADFTLTIS-RLEPEDFAVYYCQ	78
ADX66151	10	SQS-ISS-Y-----LNWFQKPGKAPKLLIYAASS----LQGGVPSRFRGS--GSGTDFTLTIS-SLQPEDFATYYCQ	73
ADX65850	15	SQT-IDD-Y-----YVAWYQRPQAPRLLIYDASS----RATGVPARFSGS--GSGTDFTLTIN-SLEPDDFAVYYCQ	79
AAA58921		-----	
ADX65925	14	SQG-IKH-Y-----LAWYQKPGKVPKLLIYGASS----LQSGVPSRFSGS--GSGTDFTLTIN-SLQPEDVATYYCQ	77
ADX65929	14	SQS-ISS-F-----LNWYQKPGKAPNLLIPLASN----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	77
ADX65930	14	SQS-VSS-N-----LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYYCQ	77
ADX66100	15	SET-VSV-N-----VAWYQKPGQPPRLLIYDASQ----RASGTSDRFSGS--GSGREFALTIT-NVQSEDSAIYYCQ	78
ADX65918	14	SQS-VSS-N-----YLTWYQKPGQAPRLLIYGASN----RASDIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYFCQ	78
ADX65822	15	SQS-VGR-S-----LAWYQKVGQSPRLLIYGAST----RATGIPVRFSGS--GTGTEFNLTIS-SLQSEDFALYYCQ	78
ADX66160	10	QOT-IHN-Y-----LNWYQKPGKAPKLLIYTASS----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYFCQ	73
ADX65877	15	SQA-INN-F-----VAWFQKPGKVPNLLISAASST----LHSGVPARFSGS--GSGTQFTLTIN-SLQADDVATYYCH	78
ADX66116	15	SQS-LSS-W-----LAWYQKPGKAPKLLIYRASS----LESGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYYCQ	78
ADX65832	15	SQR-VRS-S-----LAWYQKPGQAPRLLIYGAST----RATGFPARFSGS--GSGTAFTLTIS-SLQSEDFAVYYCQ	78
ADX65808	15	SQG-IRS-R-----LAWYQKPGQAPKLLIYSTSS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYYCQ	78
ADX66015	12	SQT-IGR-Y-----LNWYQEPGAAPRLLIYDASS----VQRGVPSRFSGS--SSGTDFTLAIT-SLQPEDSATYWCQ	75
AAF66838	19	SQG-IRN-D-----LGWYQKPGKAPKLLIYAASST----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYYCL	82
ADX65840	14	SQS-VSS-S-----YLVWYQRPQAPRLLIYGTSS----RATGVPRDRFSGS--GSGTDFTLTIS-RLEPDDFAVYYCQ	78
ADX65879	14	SQS-VSR-S-----YLAWYQKPGQAPRLLISGVYS----RAAGIPDRFRGS--GSGTDFTLTIS-SLEPEDFAVYFCQ	78
ADX66041	8	SQG-INS-Y-----LAWYQKPGKAPKLLIYAASST----LQSGVPSRFSGS--GSGTEFTLTIT-SLQPEDFATYYCQ	71
AAF66842	22	SQG-IRN-D-----LGWYQKPGKAPKLLIYAASST----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYYCL	85
ADX65862	14	SQG-ISN-Y-----LVWYRLKPGKVPPELLIYAASST----LYSGVPSRFSGS--GSGTEFTLTIN-NLQPEDAATYYCQ	77
ADX65913	14	SQA-IGN-Y-----LSWYQKPGKAPQLLIYDASN----LETGVPSRFSGS--GSGTDFLFTIS-SLQPEDFATYYCQ	77
ADX66202	14	SQS-LLH-SN--GYNLDWYLQKPGQSPQLLIYLGSN----RASGVPRDRFSGS--GSGTDFTLKIS-RVEAEDVGYYCM	82
AAF66836	15	SQG-ISS-W-----LAWYQKPGKAPKLLIYAASST----LQSGVPSRFSGS--GSGTDFTLTFS-SLQPEDFATYYCQ	78
ADX65836	22	SQG-IRN-Y-----LAWYQKPGKVPKFLINDAST----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPDDFGTYCQ	85
ADX65766	15	SQS-VDS-D-----LAWYQHKPGQAPRLLIYDVST----RATDTPARFSGS--GSGTEFTLTIS-SLQSDDFAIYYCQ	78
ADX65885	14	SQT-ISS-N-----SLAWYQHKSQAPRLLIYGASS----RVTDPDRFSAS--GSGTDFTLTIS-RLEPEDFAVYFCQ	78
AAK94869	26	SQS-VSS-----R-GAWYQRPQAPRLLIYGAST----RATGIPTRFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87

A37927 -----

AAA52928 24 SQG-ISN-Y-----LAWYQKPGKVPRLLIYAAS-----LQPGVPSRFSGS--GSGTDFTLTIS-SLQPEDVATYYCQ 87

ADX66142 12 SQS-VNK-W-----LAWYQKPGKAPRLLIYKASS-----LESGVPSRFRGS--GSGTEFTLTIS-SLQPDDFATYYCQ 75

ADX65810 9 SQS-VSS-N-----LAWYQKPGQAPRLLIYGAST-----RASGISVRFSGS--GSGTEFTLTIS-SLQSEDFAVYYCQ 72

ABY64708 33 SQS-VSS-S-----YLAWYQKPGQAPRLLIYGASS-----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ 97

ADX65817 15 SQS-ISR-S-----HLAWYQQTTPGQAPRLLIYGASI-----RGTGIPDRFSGS--GSGADFTLTIS-RLEPEDFAVYYCQ 79

ADX65897 14 SQT-VSS-S-----YLAWYQKPGQAPRLLIYGASS-----RAAGIPDRFSGS--GSGTDFTLTIS-RLEPEDYAVYYCQ 78

ADX66090 14 SLA-IMN-Y-----VTWFQKPGKAPKSLIYGASS-----LQSGVPSKFSGS--GYGTDFTLTIS-GLQPEDAATYYCQ 77

AAA52922 24 SQD-IRN-Y-----LNWYQKPGKAPKLLIYDASN-----SETGVPSRFSGS--GSGRDFFTTIS-SLQPEDVATYYCQ 87

ACJ71716 26 SQS-ISS-----Y-LNWYQKPGKAPKLLIYAASS-----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY-- 87

ADX66125 14 SQS-LLH-SN--GNNYLDWYLQKPGQSPQLLIYFLGNS-----RASGVDRFSGS--GSGTDLTLKIS-RVEAEDVGVYFCM 82

ADX65881 14 SQS-LSS-S-----YLAWYQRKPGQAPRLLIYGAYS-----RAAGIPDRFRGS--GSETDFTLTIS-TLEPEDFAVYFCQ 78

ADX66136 13 SQA-ISN-Y-----VAWYQKPGKVPKLLIYGAST-----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDVATYYCQ 76

ADX66053 15 SQS-VGS-SQRVSGSYLAWYQKPGQAPRLLIYGASS-----RATGISDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ 85

ADX65782 13 SQV-ISN-Y-----LAWYQKPGKVPPELLIYAAS-----LQSGVPSRFSGG--GSGTDFTLTIS-SLQPEDVATYYCQ 76

ADX66049 14 NKS-VNG-L-----SLAWYQKPGQAPRLLIYGASN-----RASGVDRFSGS--GSGTDFSLTIS-RLEPDDFAVYYCQ 78

ACJ71718 27 SQS-VLY-SSN-NKNYLAWYQKPGQPPKLLIYWAST-----RESGVDRFSGS--GSGTDFTLTIS-SLQAEDVAVYYCQ 96

ADX66134 13 SQG-IGN-D-----LGWFQKPGKAPKRLIYATSS-----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYYCL 76

ADX65764 4 HEN-IST-K-----VAWYQRPGQAPRLLIYDASS-----RATDVPLRFSGS--GSGTDFTLTIS-SLLSEDFAIYYCQ 67

ADX65802 15 SQD-MSN-S-----LNWFQKPGKAPKLLIYDASH-----LEAGVPSRFSGS--GSGTTFSTTIS-SLQLDDLATYYCQ 78

ADX66072 15 SQN-VIS-S-----FLAWYQHKPGQAPRLLIYGAST-----RATGVDRFSGS--GSGTDFTLTIS-RLEPEDFVYYCQ 79

ADX65759 14 SQT-INT-Y-----LNWYQHKPGNAPKLLIYAASS-----LQTVPSRFSGS--GSGTDFTLTIS-SLQPEDSAIYYCQ 77

AAF66840 16 SQG-IRN-D-----LGWYQKPGKAPKRLIYAASS-----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYYCL 79

ADX66205 14 SQS-VSS-S-----YLAWYQKPGQAPRLLIYGASS-----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ 78

ADX65916 15 SQS-VLS-NSN-NKNYLAWYQKPGQPPKLLIYWAST-----RESGVDRFSGS--GSGTDFTLTIS-SLQAEDVATYYCQ 84

ADX65874 14 SES-ITT-F-----VNWFHQKPGKAPKLLISGTSS-----LQSEVPSRFRGS--GYGTDFTLTIS-GLQPEDFATYYCQ 77

ADX65827 14 SQS-VSS-S-----YLAWYQKPGQAPRLLIYGASS-----RATGIPDRFSGS--GSGTDFILTIS-RLEPEDFAVYYCQ 78

ADX66148 1 -----LAWYQKPGKAPKLLIYAAS-----LQSGVPSRFSGS--GSGTEFTLIIS-SLQPEDFATYYCQ 57

ADX65933 15 SQS-VSS-S-----YLAWYQKPGQAPRLLIYGASS-----RVTGIPDRFSGS--GSGTDFTLTIS-RLESEDFAVYYCQ 79

ADX66011 15 SQD-VSS-Y-----LNWFQVKPGKAPKLLIYVAASH-----LQSGVPSRFSGN--GSGTDFNFTIN-SLQPEDSATYCCQ 78

ADX66140 11 SQS-LVR-SD--GNTYLSWYQQRPGQPPRLLIYKISN----RFSGVDRFSGS--GAGTDFTLKIS-RVEAEDVGIYYCM 79

ADX65955 23 SQS-LLH-SN--GNNYLDWYLQKPGQSPQLLIYFLGNS-----RASGVDRFSGS--GSGTDFTLKIS-RVEAEDVGVYYCM 91

AAS47840 26 SQS-VLY-TTK-NKNHLAWYQKPGQPPKLLIYWAST-----RESGVDRFSGS--GSGTDFSLTIT-NLQAEDVALYYCH 95

ADX66095 14 SQY-ISN-Y-----LNWYQKPGKAPNLLIYGVSS-----LQSGVPSRFSGS--ASGTDFTLTIS-SLQPEDFATYYCQ 77

ADX66175 14 SQS-VLY-SYN-NKNYLAWYQKPGQPPKLLIYRAST-----RESGVDRFSGS--GSGTDFTLTIS-SLQAEDVAVYYCQ 83

ADX66008 7 SQA-INI-F-----LNWYQKPGKAPKLLIYAASY-----LQYGVPSRFSGS--GSGTVFTLTIS-SLQPEDFATYYCQ 70

ADX65889 14 SQS-VLY-SSN-NKNYLVWYQKPGQPPKLLIYWAST-----RESGVDRFSGS--GSGTDFTLTIS-SLQAEDVAVYYCQ 83

ADX66030 7 SQS-VGS-----S-LAWYQKPGQAPRLLIYGASN-----RATGIPARFSGS--GSGTEFTLTIS-GLQSEDFAVYY-- 68

AAA52938 24 SHR-VNN-----NFLAWYQKPGQAPRLLIYGAST-----RATGIPDRFSGS--GSGTDFTLTIS-RLEPDDFAVYY-- 86

ADX66061 8 SQS-VSS-S-----SLAWYQKPGQAPRLLIYVYASI-----RATGIPDRFSGS--GSATDFTLTIS-RLEPEDFAVYYCQ 72

ABY64710 33 SQS-VSS-S-----YLAWYQKPGQAPRLLIYGASS-----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYYCQ 97

ADX66039 7 EYN-IYS-F-----LNWYQKPGQAPPELLISAASN-----LQSGVPSRFSGS--GSGTHFSLTIS-SLQPEDFATYYCQ 70

ADX65907 14 SQS-LLH-SN--GHNYLDWYLQKPGQSPHVLIIYFLGNS-----RASGVDRFSGS--GSGTEFTLKIS-RVEAEDVGVYYCM 82

ADX65791 14 SHH-ISN-Y-----VCWYQKPGKAPKLLIYDASN-----LEAGVPSRFSGS--GYGTDFFTIN-SLQPEDFATYYCQ 77

ADX65859 11 SQS-VSS-T-----YLAWYQQTTPGQAPRLLVFATSIN-----RATGIPDRFNCS--GSGTDFTLTIN-RLEPEDFAVYYCQ 75

PL0106 46 SQS-VSS-----YLAWYQRPGQAPRLLIYDASN-----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY-- 107

ADX65814 15 SQD-IRS-Y-----LAWYQKPGKAPKLLIYGASS-----LQSGVPRFTGS--VTGTDFTLTIS-SLQPEDVATYYCQ 78

ADX65849	14	SQD-IRN-Y-----LAWFQQKAGQAPKLLIYAASST----LRSGVPSFSAS--GSGTDFTLTIG-SLQPEDVATYYCQ	77
ADX65770	15	SQA-IST-Y-----LNWFQFKPGAAPQLLIYAASS----LQGGVPLRFSGL--GSGTNFTLTIR-DLQPEDFATYYCQ	78
AAB51622	18	SQS-LLH-SD--GKTYLYWYLQKPGQSPQLLIYEVSNN----RFSGVPRFSGS--GSGTDFTLKIS-RVEAEDVGVYYCM	86
AAD22771	48	SQS-VSI-----N-LAWYQQKPGQAPRLLIYDAST----RATGIPARFRGS--GSGTDFTLTIS-SLQSEDFAVYY--	109
AAK94791	26	SQS-VSS-----N-LAWYQQKPGQAPRLLIYGAST----RATGIPARFRGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
ADX65829	14	SQX-VNX-C-----LXWYQQKPGXPPRLLIYDASN----RATGXPRFSGS--GSGTDXTXTIS-SLEPXDFAVYYCQ	77
ADX65794	15	SRF-TST-F-----LNWYQKPKGQPPKLLIHAVSN----LARGVPRFSGS--GSGANFTLAIS-SLQPEDFATYYCQ	78
ADX65800	15	SEN-IRT-Y-----LNWYRQRPGKAPNLLIYEASS----LQIGIPSRFSGS--GSGTDFNLTIS-SLHPEDFATYFCQ	78
ACJ71715	26	SQS-ISS-----Y-LNWYQQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	87
ADX65909	14	SQS-VSX-KFQ-Q-----FQQKPGQPPKVLIFWASP----RESGVPRFTGS--GSGTGFTLTIS-SLQAEDVAVYYCQ	77
ADX65875	15	SQS-LLH-RN--GNNYLDWYLQKPGQSPQLLIYLGSN----RASGVPRFNGS--GSGTDFTLKIS-RVEAEDVGVYYCM	83
ADX66162	5	SQS-VSR-S-----YLAWYQQKPGQAPRLLIYGASN----RATGIPDRFSGS--GSETDFTLTIS-RLEPEDFAVYHCQ	69
ADX65789	14	SQS-VDF-N-----YLAWYQQKPGQAPRLLIYDASR----RATGIPDRFSGS--GSGTDFTLTIR-GLEPEDFAVYYCH	78
ADX66113	15	SQD-IAN-Y-----LNWYQQRPGQAPKLLIFDSSST----LQPGVPRFSGS--GSGTDFFTTIS-GLQPEDIATYYCQ	78
ADX65773	1	-----LAWSQQNPGQAPKLLMYGAST----LQSGVPSRFSGS--GSGTDFTLTIN-SLQPEDFGTYCQ	57
ADX66181	13	SQS-ISI-W-----LAWYQQKPGQAPNLLIYKASS----LESGVSSRFSGS--GSGTEFTLTIS-SLQPDFFGTYYCQ	76
ADX66131	14	SQV-ITN-S-----LAWFQQKPGKAPKLLLSGAST----LESGVPSRFSGG--GSGADYTLTIS-SLQPEDFATYYCQ	77
ADX65757	11	SRW-IGE-S-----LNWYQHKSGQAPKLLIFAATR----LQGGFPERFSGN--GSGTDFALTIN-GLQSADFATYYCQ	74
1805324B	46	SQS-VSS-----YLAWYQQRPGQAPRLLIYDASN----RATGIPARFRGS--GSGTDFTLTIS-SLEPEDFAVYY--	107
ADX66027	5	NQT-IAN-R-----FLAWYQQKLGQAPRLLIYDASS----RATDIPDRFSGG--GSGTDFTLTIS-KLEPEDFAVYYCQ	69
AAF66834	16	SQS-LVY-SDG-N-TYLNWFQQRPGQSPRLLIYKVSNN----WDSGVPRFSGS--GSGTDFTLKIS-RVEAEDVGVYYCM	84
ADX66092	15	SQT-ILY-LLN-NKNALSWYQQKPGQPPKLLIYWAST----RESGVPRFSGS--GSGTDFTLTIS-SLQAEDVAVYYCQ	84
ADX66012	15	DES-VQT-PN--GKTWLYWYLQRPGQSPQILYIELSS----RFSGVSERFSAS--GSGTSFTLNIS-RVETEDVGIYYCM	83
ADX65845	15	SQS-VLH-SSN-NKNYVAWYQQKAGQPPRLLIYWAST----RESGVPRFSGS--GSGTDFALTIS-SLQAEDVAVYYCQ	84
ADX65820	15	SQS-VLY-TPK-NKNYLAWYQQKPGQPPKLLIYRAST----RESGVPERFRGS--GSGTDFTLTIS-SLQAEDVAIYYCQ	84
AAT84392	26	SQS-V-S-----SYLAWYQQKPGQAPRLLIYDASN----RATGIPARFRGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
AAB30174	48	SQS-VSS-----N-LAWYQQKPGQAPRLLIYGASI----RATGIPDRFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	109
AAF05690	26	SQG-IST-----Y-LVWYQQKPEKAPKSLIYAASN----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	87
ADX66063	14	SYE-VSS-S-----FLAWYQQKPGQAPRLLIYGASR----RATGIPDRFSGS--GSGTDFTLTIR-RLEPEDSAVYYCQ	78
AAA52947	24	GQS-ISS-----NYLAWYQQKPGQAPRLLIYGASN----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	86
ADX65856	15	SQA-LRD-Y-----VAWYQQPPGKVPKLLIYGASA----LQSGVPSRFTGA--GYGADFLLTIS-SLQPEDVGTYYCQ	78
ABV21630	26	SQS-IDI-----Y-VNWYQHKAGKVPKLLMHTASS----LESGVPRFSGS--GSGTDFTLTIS-GLQPEDFATYY--	87
AAT84394	26	SQS-V-S-----NYLAWYQQKPGQAPRLLIYDASN----RATGIPPRFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
CAA66114	24	SQS-VS-----TYLAWYQQKPGQAPRLLIYGTSN----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFVYY--	85
ACJ71713	26	SQS-V-S-----SYLAWYQQKPGQAPRLLIYDASN----RATGIPARFRGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
ADX65768	1	-----AWHRQRPGKRPPELLIYGASI----LQSGAPARFSGR--GSGTDFTLTIS-SLQPEDVATYYCQ	56
AAB41732	46	SQS-IST-----N-LAWYQQKPGQPPRLLIFYGAST----RATGIPARFRGS--GSGTQFTLTIS-SLQSEDFAIYY--	107
AAA52918	24	SQR-VNS-----NYLAWYQQKPGQTPRVVIYSTSR----RATGVPRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	86
AAA51018	45	SQS-LNS-----N-LAWYQQKPGQAPRLLMYDIST----RATGIPARFRGS--GSGTDFTLTIS-SLQSEDFAVYY--	106
ADX65805	14	SQS-VLY-SSN-NKNYLAWYQQKPGQPPKLLIYWAST----RESGVPRFSGS--GSGTDFTLTIG-SLQAEDVAVYYCQ	83
ADX65761	14	SQS-VSF-GSS-NLNYLAWYQQKPGQPPKLLIYWASS----RDDGVPRFSGS--GSGTDFTLTIS-SLQTEDVALYYCQ	83
CBZ39886	26	SQS-ISS-----Y-LNWYQQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	87
1102971D	26	SQS-VSS-----SYLAWYQQKPGQAPRLLIYGASS----RATGIPNRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	88
2EIZ_A	26	SQS-IGN-----N-LHWYQQKPGQAPRLLIYASQ----SISGIPARFRGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
CCD30936	26	SQS-ITG-----NWWAWYQQRPGKAPRLLIYRGAA----LLGGVPSRFSGS--AAGTDFTLTIG-NLQAEDFGTFY--	88
AAV16616	30	SQS-V-S-----SYLAWYQQKPGQAPRLLIHDASN----RATGIPARFRGS--GSGTDFTLTIS-SLEPEDFAVYY--	91
ABC67113	28	SQS-V-S-----SYLAWYQQKPGQAPRLLIYDASN----RATGIPARFRGS--GSGTDFTLTIS-SLEPEDFAVYY--	89

ABC66848	28	SQS-V-S-----SNLAWYQOKPGEAPRLLIYGAST----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	89
CAB93577	26	SQS-VNS-----N-LAWYQOKPDQAPRLLIYTAST----RATGVPARFSGS--GSGTEFTLTIS-SLQSDDFAVYY--	87
AA16624	27	SQS-VSS-----YLAWYQOKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	88
AAB41731	46	SQS-LSK-----SLAWYQOKPGLAPRLLIYDVSK----RATGVPARFSGS--GSGTDFALTIS-SLEPEDFAIYY--	107
ABC67088	28	SQS-VGT-----NLAWFQOKPGQAPRLLIYEASN----RATGIPARFSGS--GSGTDFTLTIS-RLEPEDFALYY--	89
AA16615	28	SQS-V-S-----SYLAWYQOKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	89
ADX65749	23	SQN-MRS-----D-LAWYQOKPGQAPRLLIFGASS----RATDIPARFSGT--GSGTEFSLTIS-SLQSEDFAVYY--	84
AA16619	28	SQS-V-S-----SYLAWYQOKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	89
CAG27043	26	SQS-IGS-----N-LHWYQOKPDQSPKLLIKYASQ----SFGVPSRFSGS--GSGTDFTLTIN-SLEAEDAATYY--	87
AAT86033	26	SQS-ISS-----F-LNWYQOKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	87
ABC67137	28	SQS-V-S-----RFLAWYQOKPGQAPRLLIYDASN----RATGITARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	89
ADX65798	22	SES-LLY-SDG-N-TYLCWLHQRPQSPRLLIHQVSN----RDSGVPDRFSGN--GSDTNFTLKIS-RVEAEDVGIYYCM	90
ABC66851	28	SQS-VSS-----YLAWYQOKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	89
AAL96507	24	SQS-VTN-----YLAWYQOKPGQAPRLLIYGASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	85
ABA71382	26	SQS-VSS-----HLAWYQOKPGQAPRLLIFETSD----RAAGIPARFSGS--GSGTDFTLTIS-SLEPEDSAVYY--	87
AAT84400	26	SQS-ISS-----Y-LNWYQOKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	87
ABC67089	28	SQS-VGT-----NLAWFQOKPGQAPRLLIYEASN----RATGIPARFSGS--GSGTDFTLTIS-RLEPEDFALYY--	89
AAZ32299	25	SQS-VSS-----YLAWYQOKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	86
ACF34414	26	RSN-IGA----G-YHVHWYQQLPGTAPKLLIYADTN----RPSGVPDRFSGS--KSGTSASLAIT-GLQAEDEAEYYCQ	91
AAB53267	46	SQT-VSS-----TYLAWYQOKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPADFAVYY--	108
AAL96511	24	SQS-VGS-----HLAWYQOKPGQAPRLLMYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFALYH--	85
AAF05689	26	SQG-ISN-----Y-LAWYQOKPGKVPNLLIYGAST----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDVATYY--	87
AAA59100	48	SQS-ISS-----Y-LNWYQOKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	109
CAA66113	24	SQS-ISS-----W-LAWYQOKPGKAPKLLIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-NLQPDSDATYY--	85
AAB26430	48	SQG-ISS-----W-LAWYQOKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	109
ABC66966	28	SQS-VSS-----YLAWYQOKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	89
AAA86784	39	SQS-VSS-----YLAWYQOKPGQAPRLLIYDASN----RATGIPATFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	100
AAB53268	46	SQS-VSS-----SYLAWYQOKPGQAPRLLIYGASS----RATGIPDRVSGS--GSGTDFTLTIS-RLEPEDFAMYY--	108
ADX65785	1	-----LAWYQOKPGEAPKLLIYGAST----LQSGVPSRFSGS--GSGTEFTLTIN-SLQPEDFGTYFCQ	57
BAC01816	48	SSN-IGA----G-YDVHWYQQLPGTAPKLLIYGNSN----RPSGVPDRFSGSK--SGTSASLAIT-GLQAEDEADYYCQ	113
CAJ57364	26	SQS-ISS-----Y-LNWYQOKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	87
3H42_L	26	SSN-IGA----G-YDVHWYQQLPGTAPKLLISGNSN----RPSGVPDRFSGS--KSGTSASLAIT-GLQAEDEADYYCQ	91
AAH73769	45	SSN-IGA----G-YDVHWYQQLPGTAPRLLIYGNSN----RPSGVPDRFSGS--KSGTSASLAIT-GLQAEDEADYYCQ	110
AAT84385	26	SQS-VSS-----SYLAWYQOKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	88
AAV28163	43	SQS-VSF-NSN-SKNFLAWYQOKPRQPPELLIYWAST----RESGVPDRFSGS--GSETDFTLTIS-SLQAEADVAVYYCQ	112
AEO16794	45	SSN-IGA----G-YDAYWYQQLPGTAPKLLIYGNSN----RLSGVPDRFSAS--KSGTSASLAIT-GLQAEDEADYYCQ	110
ADX65778	14	SQS-VFY-SSN-NKNYLAWYQOKPRQPPELLIYWAST----RSGVPSRFSGS--GSGTDFTLTIS-SLQAEADVAVYYCQ	83
S54905	26	SQS-VSS-----YLAWYQOKPGQAPRLLIYDASR----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
AAB25738	26	SQS-VAT-----YLAWYQHKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPADFAVYY--	87
B26555	26	SQS-ISS-----N-LAWYQOKPGQAPRLLIYAASST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
3PIQ_L	26	--N-IA-----N-KNVHWYQOKPGQAPVLIYYDDDD----RPSGIPDRFSGS--NSGNTATLTIS-RVEAGDEADYYCQ	88
BAC01836	48	SSN-IGA----G-YDVHWYQQLPGTAPKLLIYGNSN----RPSGVPDRFSGSK--SGTSASLAIT-GLQAEDEADYYCQ	113
3P30_L	26	SSN-IG-----N-NYVYWYQQLPGTAPKLLIYKNNI----RPSGVPDRFSGS--KSGTSASLAIS-GLRSEDEADYYCA	90
AA16591	28	SQS-VSS-----SYLAWYQOKPGQAPRLLIYGASS----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	90
ADX65734	23	SQS-VLS-SSN-NKDYLAWYQOKPGQPPKLLTYWAST----RQSGVPSRFSGS--GSGTDFTLTIS-SLQAEADVAVYYCQ	92
AAC41918	26	SQS-VSS-----N-LAWYQOKPGQAPRLLIYGAST----RATGMPARFRGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
AA16617	28	SQG-V-S-----SYLAWYQOKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAAYY--	89

AAM46647	46	SQR-VGR-----TNVAWYQKFGQAPRLLIYDASS----RATGIPDRFSGS--GSGTDFTLTIS-RMEPEDFAIYY--	108
ABA71381	26	SES-VRG-----YLIWYQKRGQAPRLLISDTSN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
AAH20233	45	SSN-IGA-----G-YDVHWYQQLPGTAPKLLIYGNSN----RPSGVPDRFSGS--KSGTSASLAI--GLQAEDEADYYCQ	110
AAH22098	45	SSN-IGA-----G-YDVHWYQQLPGTAPKLLIYGNSN----RPSGVPDRFSGS--KSGTSASLAI--GLQAEDEADYYCQ	110
JE0246	26	SSN-IGA-----G-YPVHWYQQLPGAAPKLLISDNYN----RPSGVPARFSGS--KSGTSASLAI--GLQAEDEADYYCQ	91
BAC01586	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
AAH54883	45	--N-IG-----A-KSVHWYQKTDQAPVLVVDHND----RPSGIPERFSGS--NSGNTATLTIS-RVEPEGDEADYFCQ	107
AAC37556	14	SQS-ITS-----SLAWYQKPGQAPRLLIYDASN----RDTGIPARFSGR--GSGTDFTLTIS-SLEPEDFAVYY--	75
CAJ57360	26	SQG-ISR-----H-LAWYQEKPGKVPKLLIYAAS--LQSGVPSRFSGS--GSGTDFTLTIS-CLQPEDVATYY--	87
S25744	45	RSN-VG-----S-NNVNWYQQLPGTAPKLLIYNNQ----RPSGVPDRFSGS--KSGTSASLAI--GLQSEDEADYYCA	109
CAJ57363	26	SQS-VSS-----SYLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	88
AAA59089	48	SQS-ISS-----Y-LNWYQKPGKAPKLLIYAASS--LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	109
AA16597	26	SQS-V-S-----SYLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYYCQ	89
AAT84387	26	SQS-VSS-----SYLAWYQKPGAPRLLIYDASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	88
S23628	26	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
ADX65755	14	SRS-LLA-TD--GYNLDWYLHKPGQPQLLIYLGSK--RASGVPERFSGS--GSGRNFTRLIS-RVEAEDVGIYYCM	82
AAA20447	46	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	107
AAD16616	19	SQS-VNS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	80
AAC41922	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
BAC01795	48	AL---PK-----Q-Y-AYWYQKPGQAPVLVIYKDE--RPSGIPERFSGS--SGTTVTLTIS-GVQAEDEADYYCQ	110
CAG27030	29	SQS-VNN-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	90
3Q6F_A	26	--N-IA-----N-KNVHWYQKPGQAPVLVIYDSD--RPSGIPDRFSGS--NSGNTATLTIS-RVEAGDEADYYCQ	88
AA16600	25	SQS-V-S-----SYLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYYCQ	88
ABY48868	26	SHS-VSR-----N-LAWYQKPGRAPRLLIYDTS--RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
ABC66846	28	SQS-ISS-----Y-LNWYQKPGKAPKLLIYAASS--LQSGVPSRFSGS--GSGTDFTLTIS-CLRSEDFATYY--	89
AAH73770	45	SSN-IGA-----G-YGVHWYQQLPGTAPKLLISNNSN----RPSGVPDRFSGS--KSGTSASLAI--GLQAEDEADYYCQ	110
AA16599	26	SQS-V-S-----SYLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYYCQ	89
ABA26038	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
S20631	46	SQK-IKN-----NYLAWYQKPGQAPSLVIYGVSI--RATGIPDRFSGS--GSETDFTLTIS-RLEPEDFAVYY--	108
BAC01771	48	SSN-IGA-----G-YDVHWYQQLPGTAPKLLIYDIN--RPSGVPDRFSGS--SGTSASLAI--GLQAEDEADYYCQ	113
AA16618	28	SQS-V-S-----SYLAWYQKPGQAPRLLIYDASI--RATDIPARFSGS--GSGTDFTLTIS-SLEPDDFAVYY--	89
CAJ57362	26	SQS-ISS-----Y-LNWYQKPGKAPKLLIYAASS--LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	87
AAH30984	45	RSN-IG-----S-NYVWYQVPGTAPKLLIYRNDQ--RPSGVPDRFSGS--KSGTSASLAI--GLRSEDEADYYCA	109
AAV28164	43	SQS-ILS-SSN-NNNYLAWYQKPGQSPNLLIYWAST--RESGVPDRFSGS--GSGTDFTLTIS-SLQAEDEVAVYYCQ	112
CAD43025	26	SQS-VSS-----YVAVYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
1AQK_L	26	NSN-IGA-----G-FTVHWYQHLPGTAPKLLIFANTN--RPSGVPDRFSGS--KSGTSASLAI--GLQAEDEADYYCQ	91
ABA71388	26	SQG-VGT-----W-LAWFQKPGKPKLLIYGASN--LQSGVPSRFSGS--GAGTDFTLTIT-SLQPEDFATYY--	87
AAB37391	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
AAD19463	22	SRS-VNI-----N-VAWYQKPGQAPRLLIFGAST--RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	83
CAA85586	26	SQS-ISS-----Y-LNWYQKPGKAPKLLIYAASS--LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	87
ABA26068	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
ABA71363	26	SQT-IFS-----Y-LHWYQNPQKAPRLLIYVSS--LRSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	87
ADU32611	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
ABU90703	26	NSN-IGT-----G-YDLHWYQQLPGTAPKLLIYGNTN--RPSGVPDRFSGS--KSGTSAYLAI--GLQAEDEADYYCQ	91
3MLX_L	25	SSN-IG-----N-NMVSWYQHPGTAPKLLIYENSK--RPSGIPDRFSGS--RSGTSATLGI--GLQTGDEAEYYCA	89
CAC28926	26	SQS-ISS-----Y-LNWYQKPGKAPKLLIYAASS--LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	87
AAH28090	45	--N-IG-----S-KSVHWYQKPGQAPVLVYDSD--RPSGIPERFSGS--NSGNTATLTIS-RVDAGDEADYYCQ	107



1615309A	26	SSN-IG-----R-NYVNWYQQLPGTAPKLLIYKNSQ---- <td>90</td>	90
AAZ09098	26	SQS-INN-----YLAWYQKQKPGQAPRLLIYDASN----RATGIPTRFSGS--GSGTDFTLTIN-SLEPEDFAVYY--	87
AAD00856	26	SQS-LVY-SDG-N-TYLNWFQQRPGQSPRLLIYKNSQ----RDSGVDRFSGS--GSGTDFTLKIS-RVEAEDVGVYYCM	94
BAC01807	48	AL---PK-----Q-Y-AYWYQKQKPGQAPVLIYKDESE----RPSGIPERFSGS--SGTTFVTLTIS-GVQAEDEADYYCQ	110
ABA71377	26	SQS-VSS-----RYLAWYQKQKPGQAPRLLIYFASG----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	88
AAW69127	26	SQS-VSS-----N-LAWYQKQKPGQSPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAAVYY--	87
CAA85588	26	SQS-ISS-----Y-LNWXQKQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	87
AAB25319	50	SQS-VDN-----YYLWYQKQKPGQAPRLLIYFASG----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAIYY--	112
ABC67125	28	SQS-VNN-----NYLAWYQKQKPGQAPRLLIYLASY----RATGIPYRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	90
AAT84398	18	SQS-ISS-----TYLAWYQKQKPGQAPRLLIYFASG----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	80
ACF34423	26	SSN-IG-----I-NNVNWYQHLPGTAPKLLIYTNNE----RPSGVDRFSGS--KSGTSASLAIIS-GLQSEDEADYYCS	90
3MLY_L	26	SSN-IG-----N-NMVSQYQHPGTAPKLLIYENSK----RPSGIPDRFSGS--RSGTSATLGIIS-GLQTDGAEADYYCA	90
P01624	26	SQS-ISN-----SYLAWYQKQKPGQSPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	88
BAC01805	48	NI---GS-----K-S-VHWYQKQKPGQAPVLIYDSD----RPSGIPERFSGSN--SGNTATLTIS-RVEAGDEADYYCQ	110
BAC01847	48	SSN-IGA-----G-YDVHWYQQLPGTAPKLLIYGNNS----RPSGVDRFSGSK--SGTSASLAIIS-GFQAEDEADYYCQ	113
CAA51140	36	SQS-VSS-----N-LAWYQKQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	97
AAT86034	26	SQS-ISS-----Y-LNWXQKQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	87
CCD30934	26	SQG-----LNFWVWYQKGGQAPRLLIYHPTD----RAPGVDRFSAR--GSGTEFSLVIS-SVEPDDFALYYCQ	88
S40362	36	SQS-VSS-----N-LAWYQKQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	97
ABC66950	28	SQS-ISS-----Y-LNWXQKQKPGKAPKLLIYVASN----LHSGVPSRFSGS--GSGTDFSLTIN-ILQPEDFATYY--	89
AAB53322	26	SQS-VSS-----N-LAWYQKQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
S40343	46	SQS-VSS-----N-LAWYQKQKPGQAPTVLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	107
ABZ81098	26	SQS-VSS-----N-LAWYQKQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
3LMJ_L	26	SSN-IG-----K-NYVSWYQQLPGAAPKLLIFDDTQ----RPSGIPDRFSGS--KSGTSATLAIIS-GLQTDGAEADYYCG	90
AAW69248	26	SQS-VSS-----N-LAWYQKQKPGQAPRLLIYGAST----RATGIPARFXGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
S25756	45	--N-IG-----S-KSVHWYQKQKPGQAPVLIYVYDSD----RPSGIPERFSGS--NSGNTATLTIS-RVEAGDEADYYCQ	107
1NL0_L	26	TSN-IG-----N-NYVSWYQHPGKAPKLLIYDVSK----RPSGVDRFSGS--KSGNSASLDIIS-GLQSEDEADYYCA	90
AAC41988	26	SQS-VGS-----SLAWYQKQKPGQAPRLLIYVYDTSN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFADYY--	87
AAD48834	26	SQN-VGN-----N-LAWYQKQKPGQAPRLLIYDAST----RATGVPARFSGS--GSGTEFTLTIS-SLQSEDFTVYY--	87
1102971A	26	SQS-VSS-----SYLAWYQKQKPGQAPRLLIYFASG----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	88
ABU90694	26	RSN-IG-----S-NIVNWHQFPGTAPKLLIYSDQ----RPSGVDRFSGS--KSGTSASLAIIS-GLQSEDEADYYCA	90
ACF34413	26	--N-IE-----N-TGVHWYQKQKPGQAPVLIYVYDSD----RPSGTPERFSGS--NSGNTATLMIS-RVEAGDEADYYCQ	88
1102971B	26	SQS-VRS-----SYLAWYQKQKPGQAPRLLIYFASG----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	88
ACR16228	28	SQS-V-S-----SYLAWYQKQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYYCQ	91
AAW67418	28	SQS-VSS-----N-LAWYQKQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	89
ADU32644	26	SQS-VSS-----N-LAWYQKQKPGQAPRLLIYAASS----RATGIPARFSGS--GSGTEFTLTIS-SLQPEDFAVYY--	87
ABC66880	28	SQS-VSS-----SYLAWYQKQKPGQAPRLLIYFASG----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	90
ABA71362	26	SQS-ITM-----N-LNWXQKQKPGKAPKLLIYAASS----LQSGVPSKFSGS--GSGTDFTLTIS-SLQAEFATYF--	87
AAH73794	45	--N-IG-----T-KSVHWYQKQKSGQAPVLIYVYDSD----RPSGIPERFSGS--NSGNTATLTIS-RVEAGDDADYFCQ	107
AAC16894	26	SQS-FTS-----K-LGWYQKQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
S29258	26	SSN-IGA-----R-YDVNWYQQLPGTAPKLLIYGNTI----RPSGVDRFSGS--KSGTSASLAIIS-GLQAEDEADYYCQ	91
ABC66849	28	SQS-VSS-----SYLAWYQKQKPGQAPRLLIYFASG----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	90
CAA11830	46	SQS-FSS-----SYLAWYQKQKPGQAPRLLIYGAST----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	108
CAA67399	26	SQS-VGN-----YLAWYQKQKPGQAPRLLIYASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
AAB49706	26	SQS-VSS-----N-LAWYQKQKPGQAPRLLIYGAST----RATGIPARFTGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
ACZ97421	45	SSN-IG-----K-NYVSWYQQLPGAAPKLLIFDDTQ----RPSGIPDRFSGS--KSGTSATLAIIS-GLQTDGAEADYYCG	109
AAB03781	24	SQR-IST-----SFLAWYQKQKPGQSPRLLIYDAST----RAPGIPDRFSAS--WSGTDFTLTIS-RLEPEDFAVYY--	86

AAC97103	26	SQD-ISN-----Y-LNWXQKPKGKAPKLLIDGASN----LETGVPSRFSGS--GSGTDFTTTIS-SLQPEDIATYY--	87
ABC67083	28	SQS-ISS-----Y-LNWXQKPKGKAPKLLIYVASN----LHSGVPSRFSGS--GSGTDFSLTIN-ILQPEDFATYY--	89
AA16589	28	SQS-VSS-----SYLAWYQKPGQAPRLLIYGASS----RATGVPDFRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	90
AAA86778	38	SQG-IRN-----D-LGWYQKPKGKAPKLLIYDAK----LQSGVPSRFSGS--RSGTEFTLTIS-SLQPEDFATYY--	99
S21066	26	SSN-IGA----R-YDVNWXQQLPGTAPKLLIYGNTI----RPSGVPDFRFSGS--KSGTSASLAI-GLQAEDEGDYYCQ	91
S34005	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
AAK62672	23	SQS-VGR-----NLGWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	84
AAK71572	30	SQS-VSS-----SYLAWYQKPGQAPRLLIYDAST----RATGIPARFSGR--GSGREFTLTIS-SLQSEDFAVYY--	92
CAA34118	46	SQS-VSS-----YLAWYQQRPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	107
AAF03880	26	SQS-LLR-RDG-H-NDLEWYLQKPGQSPQLIYLGST----RASGVPDFRFSGS--GSGTDFTLKII-RVEAEDAGTYICM	94
ABC66951	28	SQD-ISS-----W-LAWYQKPKGKAPKLLIYAAS-----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	89
ABA71385	26	SQD-INS-----W-LAWYQQRPGKVPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	87
AAT96437	26	SQS-VSS-----K-LAWYQKPGQAPRLLIFGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
AAB50823	46	SQS-VST-----N-LAWYQKPGQAPRLLIYGASI----RATGISARFSGS--GSGTEFTLNIT-SLQSGDLALYF--	107
AAC41984	26	SQS-VGS-----SLAWYQKPGQAPRLLIYDTSN----RATGIPARFNGS--GSGTDFTLTIS-SLEPEDFADYY--	87
AAL65707	24	SQS-ISS-----YLAWYQQRPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	85
AAC41993	26	SQS-VNS-----RLVWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
AAH72392	45	SSN-IG-----N-SYVSWYQFPGAAPQLLIYDNDK----RPSGIPDRFSGS--KSGTSATLAI-GLQTEDEAEYYCG	109
CAA85587	26	SQS-ISS-----Y-LNWXQKPKGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	87
AAD14417	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
S05270	45	SSN-IG-----N-NYVSWYQQLPGTAPKLLIYDNNK----RPSGIPDRFSGS--KSGTSATLGIT-GLQTGEADYYCG	109
ABA26082	26	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
3SM5_L	26	--D-IG-----R-KSVHWYQKPGQAPVLVVCYDSD----RPSGIPERFSGS--NSGNTATLTIS-RVEAGDEADYYCQ	88
ABC67023	28	SQS-ISS-----Y-LNWXQKPKGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	89
S25746	45	SSN-IGA----G-HHVHWYQVPGTAPKLLIYADNN----RPSGVPDFRISGS--KSGTSASLAI-GLRAEDEADYYCQ	110
1206991E	26	SQS-VSS-----SYLAWYQQRPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	88
AAD44145	26	SQD-ISN-----Y-LNWXQKPKGKAPKLLIDGASN----LETGVPSRFSGS--GSGTDFTTTIS-SLQPEDIATYY--	87
AAR88372	21	SQS-VSS-----D-LAWYQKPGQAPRLLIYGAST----RATAIPARYSGG--GSGTAFTLTIS-SLQSEDFAVYY--	82
AAK94844	26	SQS-VSS-----YLAWYQQRPGQVPRLLIYDAST----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
ACR16233	28	SQS-V-N-----SYLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYYCQ	91
AEL30602	26	SQS-VSS-----N-LAWYQMPGQAPRLLIYGAST----RATGIPARLSGS--ASGTEFTLTIS-SLQSEDFAVYY--	87
2JB5_L	26	SSD-VGS-----N-NYVSWYQHPGKAPKLLIYGGSN----RPSGVSNRFSGS--KSGNTASLTIS-GLQAEDEADYYCR	91
1ADQ_L	25	--N-IG-----S-KSVHWYQKPGQAPVLVYDSDSD----RPPGIPERFSGS--NSGNTATLTIS-RVEAGDEADYYCQ	87
BAC01858	48	NI---GS-----K-N-VHWYQKPGQAPVLVIYRDSN----RPSGIPERFSGSN--SGNTATLTIS-RAQAGDEADYYCQ	110
AAD19427	21	SQS-VST-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	82
1102971C	26	SQS-VSS-----SYLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	88
AAZ32306	28	SQS-VSS-----SYLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	90
AAW69074	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
1ZVO_A	26	SSN-IG-----R-YYVWYQQLPGTTPKLLIYKDNQ----RPSGVPDFRFSGS--KSGTSASLAI-GLRSEDEADYYCA	90
2XQB_L	22	TSN-LK-----R-NYVWYQQLPGTAPKLLIYRDRR----RPSGVPDFRFSGS--KSGTSASLAI-GLRSEDEADYYCA	86
CAJ57183	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
1Q1J_L	26	SSN-IG-----N-NYVLWYQFPGTAPKLLIYGNK----RPSGIPDRFSGS--KSGTSATLGIT-GLQTGEADYFCA	90
BAC01774	48	SSD-IGA----G-SDVHWYQQLPGTAPKVVYIGDNT----RPSRVPDRFSGSK--SGTSATLAI-GLQGEDEADYYCQ	113
ABU90688	26	--N-IG-----S-ESVHWYQHKGQAPVLVIYDDTD----RPSGIPERFVGS--NSGNTATLTIN-RVEDGEADYYCQ	88
1206991B	26	SQS-VSS-----SYLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	88
AAC41992	26	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
S40379	46	SQS-VSS-----YLAWYQKPGQPRLLIYVASN----RATGIPARFSGS--GAGTDFTLTIS-SLEPEDFAVYY--	107

AA16639	28	SQS-ISS-----W-LAWYQKPGKAPKLLIYKASR----LESGVPSRFSGS--GSGTDFTLTIS-SLQPDDFATYY--	89
ABE03813	26	SQG-IRS-----W-LAWYQQRPGRAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIT-SLQPEDFVTTY--	87
ABC67131	28	SQS-ISS-----Y-LNWXQKPGKAPKLLIYVASN----LHSGVPSRFSGS--GSGTDFSLTIN-ILQPEDFATYY--	89
AAD56267	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYCAST----RATGIPARFSGS--GSGTEFTLTIS-SLQFEDFAVYY--	87
3C2A_L	26	SSN-IG-----N-NYVLWYQFPGTAPKLLIYGNK----RPSGIPDRFSGS--KSGTSATLGIT-GLQTGDEADYFCA	90
A56701	46	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	107
CCD30932	26	SQG-----LNFWVWYQKRGQAPRLLIHAPSG----RAPGVDRFSAR--GSGTEFSLVIS-SVEPDDFAIYYCQ	88
AAU14891	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIN-SLQSEDFAVYY--	87
AAW69100	29	SQS-VGS-----D-LVWYQQRPGQAPRLLIYRASL----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	90
ABC67132	28	SQS-ISS-----Y-LNWXQKPGKAPKLLIYVASN----LHSGVPSRFSGS--GSGTDFSLTIN-ILQPEDFATYY--	89
AAC41991	26	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
ABC66850	28	SQS-VSS-----SYLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	90
ABA70850	26	SQS-VNN-----HLVWFQKPGQVPRLLIYAASH----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
S25757	44	TSN-IG-----S-NTVNWYQQLPGTAPKVLIIYNNNE----RPSGVDRFSGS--KSGTSASLAIS-GLQSDDEADYICA	108
AAK94835	26	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
AAW69069	26	SQS-VGS-----D-LVWYQQRPGQAPRLLIYRASL----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
ABG38342	28	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	89
BAC01796	48	KL---GD-----K-Y-ACWYQKPGQSPVLVIYQDSK----RPSGIPERFSGSN--SGNTATLTIS-GTQAMDEADYICQ	110
4DAG_L	26	--K-LG-----D-KYASWYQKPGQSPVLVIYQDSE----RPSGIPERFSGS--NSGNTATLTIS-GTQAMDEADYICQ	88
ABU90722	26	SGS-IAS-----NYVQWYQQRPGSAPSTLIFEDKQ----RPSGVDRFSGSIDTSSNSASLTIS-GLKTEDEADYICQ	92
AAC64144	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
ABC66942	26	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
3G6D_L	26	--N-IG-----G-TFVSWYQKPGQAPVLVIYDDND----RPSGIPERFSGS--NSGNTATLTIS-GTQAEDEADYICG	88
G44151	25	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	86
AAA03468	26	SQS-VST-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIR-SMQSEDFAVYY--	87
AAR84230	26	SQR-VSL-GSN-NKNYLAWYQHQPQPRLIYWAST----RESGVDRFSGS--GSGTDFTLTIN-SLQAEDVAVYYCQ	95
ABA70836	26	SQG-ISS-----W-LAWYQKPGKAPKLLIYAASN----LQSGVPSRFSGS--RSGTDFTLTIS-SLQPEDFATYY--	87
AAB41520	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SMQSEDFAVYY--	87
CAB99323	46	SQS-VAS-----AYLAWYQKPGQAPRLLIYGASS----RATDIPHRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	108
AE016796	45	SSN-IGA-----G-YGVHWYQQLPGAAPKLLVYGNNSN----RPSGVDRFSGS--KSGTSASLAIT-GLQAEDEADYICQ	110
ABU90610	26	SGS-IGS-----NYVQWYQQRPRSPSTVIYEDIE----RPSGVDRFSGSIDQSSNSASLTIS-GLKAEDEADYICQ	92
AEM89218	45	--N-IG-----T-KVLHWYQQTTPGQAPVLVYDDSD----RPSGIPERFSGS--NSGNTATLTIS-RVEVGDEADYICQ	107
ABC66862	28	SQS-ISS-----Y-LNWXQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	89
1W72_L	26	--N-IG-----S-RSVHWYQKPGQAPVLVYDDSD----RPSGIPERFSGS--NSGNMATLTIS-RVEAGDEADYICQ	88
ACF34411	26	SSN-IG-----G-NVVNWXQQLPGMAPKVLIIHSQNG----RAPGVDRFSGS--KSDTSASLAIS-GLQSEDEADYICA	90
AAD19434	21	SQS-ISS-----HLAWYQHKGQAPRLLIYETSND----RVTGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	82
0903206A	26	SSN-IG-----D-NFVSWYQQLPGTAPKLLIYDNNK----RPSGIPDRFSGS--KSGTSATLGIT-GLQTGDEADYICG	90
7FAB_L	26	SSN-IGA-----G-HNVKWXQQLPGTAPKLLIYHNN-----ARFSVS--KSGTSATLAIIT-GLQAEDEADYICQ	84
1206991C	26	SQS-VSS-----SYLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	88
AAA20162	26	SQS-VSS-----YLAWYQEKPGTAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
AA16590	28	SQS-VSN-----NYLAWYQKPGQAPRLLIYAASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	90
AAB24270	26	SSN-IGA-----G-HNVKWXQQLPGTAPKLLIYHNN-----ARFSVS--KSGTSATLAIIT-GLQAEDEADYICQ	84
AAD16618	20	SQS-VSS-----YLAWYQKPGQAPRLLIYDASY----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	81
ADX66128	15	SQS-ISN-----N-LAWYQKPGQAPRLLIYDAST----RATGIPARFAGS--GSGTEFTLTIS-SLQSEDFALYY--	76
CAC06693	26	SQS-VSS-----TYLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	88
AAD19497	22	SQS-VGS-----K-LAWYQKPGQAPRLLIYGAST----RASGVPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	83
AAD48829	26	SQN-IGN-----S-LAWYQLKPGQAPRVMYDPST----RATGIPARFSGS--GSGTEFTLTIN-SLQSEDFAVYY--	87

ACF34422 26 --T-LR-----S--YYANWYQOKTGPVPLVIYYANN----RPSGIPDRFSGS--TSGNTASLTIT-GAQAEDADYYCN 88  
 B49444 26 SSN-IGA-----G-HNVKWYQQLPGTAPKLLIFHNN-----ARFSVS--KSGTSATLAIIT-GLQAEDADYYCQ 84  
 1206991A 26 SQS-VSS-----SYLAWYQOKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY-- 88  
 ABC66967 28 SQS-VSS-----YLAWYQOKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY-- 89  
 3GBM\_L 26 SSN-IG-----N-DYVSWYQQLPGTAPKLLIYDNNK----RPSGIPDRFSGS--KSGTSATLGIT-GLQTGDEANYCA 90  
 AAA20158 26 SQS-VSS-----N-LAWYQOKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY-- 87  
 AEN14418 26 SQS-VKN-----N-LAWYQKRPQAPRLLIFDTSS----RASGIPARFSGG--GSGTEFTLTVN-SMQSEDFATYY-- 87  
 S25751 45 --K-LG-----D-KYASWYQOKAGQSPVLIYRHSK----RPSGIPERFSGS--NSGNTATLTIS-GTQVMDEADYYCQ 107  
 3NH7\_L 26 --S-LG-----S-KYVIWYQOKPGQAPVLIYDDSN----RPSGIPERFSGS--NSGNTATLTIS-GTQAEDADYYCS 88  
 ABU90591 26 SGK-IAT-----NYVQWFQORPGSSPTTVIFEDKI----RPSGVDRFSGS IDTSSNSASLTIS-GLETEDEADYYCQ 92  
 AEK69362 26 SQS-VSS-----YLAWYQONPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY-- 87  
 AAY16633 26 SQS-VSS-----SYLAWYQOKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY-- 88  
 0610195A 26 SSN-IGR-----NTVNWYQOVPGAAPKLLVYSNNO----WPSGVDRFSGS--KSGTSASLAIIS-GLHSEDEADYFCA 90  
 AAW69171 26 SQS-VTS-----N-LAWYQOKPGQAPRLLIYVAST----RATGIPDRFSGS--GSGTEFTLTIS-SLQSEDFAVYY-- 87  
 AAF79137 26 SQS-VNN-----N-LAWYQONPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAIYY-- 87  
 CAJ13455 26 SQS-IGS-----S-LHWYQOKPDQSPKLLIKYASQ----SFGVPSRFSGS--GSGRDFTLTIN-SLEAEDAATYY-- 87  
 1RZF\_L 26 SSN-IG-----N-NDVSWYQFPPTVTKLVIYENNE----RPSGIPDRFSGS--KSGTSATLGIT-GLQTGDEADYYCG 90  
 AAY16598 28 SQS-VSS-----SYLAWYQOKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY-- 90  
 3G04\_A 26 SSN-IG-----N-NAVNWYQQLPGKAPKLLIYDDQ----LPSGVSDRFSGS--RSGTSASLAIR-GLQSEDEADYYCT 90  
 AAF13225 26 ISN-IG-----I-NSVYWYQQLPGTAPKLLFYRNNQ----RPSGVDRFSGS--KSGTSASLAIIS-GLRSEDEADYYCA 90  
 CAA85594 26 SQS-VSR-----SQLAWYQOSPGQAPRLLIYDASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY-- 88  
 AAB03782 24 SQG-VSS-----GSLAWYQOKAGQAPRLLIYGASR----RATGIPDRFTGS--GSGTDFTLTIT-RLEPEDFAVYY-- 86  
 ABY48867 26 SSN-IG-----S-YTVNWXQQLPGTAPKLLIYSLNQ----RPSGVDRFSGS--KSGTSASLAIIS-GLQSEDEAVYYCA 90  
 S40328 45 SQS-VIH-----N-LAWYQOKPGQAPRLLIYGAYT----RATGVPARFSGS--GSGTEFTLTIS-GLQSEDLATYY-- 106  
 ABC66939 28 SQG-ISS-----Y-LAWYQOKPGKAPKLLIYAASST----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYY-- 89  
 AAO22175 25 SQX-ISN-----Y-LDWYQOKPGKAPKLLIYDAST----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY-- 86  
 S25738 45 --T-LG-----D-KYACWYQOKPGHSPVLIYFQDSK----RPSGIPERFSGS--NSGNTATLTIS-GTQAMDEADYYCQ 107  
 CAA85584 26 SQS-ISS-----Y-LNWXQOKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY-- 87  
 1206991D 26 SQS-VSS-----RYLAWYQOKPGQAPRLLIYGASS----RATGIPDRFTGS--GSGTDFTLTVS-RLEPEDFAVYY-- 88  
 AAW69195 26 SQS-VSS-----N-LAWYQOKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY-- 87  
 AAH70353 45 --N-VG-----S-KAVHWYQOKPGQAPVLIYDYDTD----RPSGIPERFSGS--NSGNTATLTIS-RVEAGDEADYYCQ 107  
 AAZ09054 26 SQS-VSS-----YLAWYQOKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY-- 87  
 AAR84233 26 SQR-VSL-GSN-NKNYLAWYQHQPQPRLLIYWAST----RESGVDRFSGS--GSGTDFTLTIN-SLQAEDVAVYYCQ 95  
 AAH32452 45 --A-LP-----K-KYAYWYQOKSGQTPVLIYDDTE----RPSGIPERFSGS--SSGTVATLTIS-GAQVEDEADYYCY 107  
 AAQ55267 24 SQS-VGS-----NLAWYQOKPGQAPRLLIYGVSS----RATGIPARFSGS--GSGTKFTLTIS-SLRSEDFAVYY-- 85  
 AAW69176 26 SQS-VTS-----N-LAWYQOKPGQAPRLLIYVAST----RATGIPDRFSGS--GSGTEFTLTIS-SLQSEDFAVYY-- 87  
 ABC67121 28 SQG-ISS-----W-LAWYQOKPEKAPKSLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY-- 89  
 ABA70776 36 SQS-ISS-----Y-LNWXQOKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY-- 97  
 BAC01827 49 DIS-VGS-----Y-R-IYWYQOKPGSPPFLLKYTSDSKQOQSGVPSRFSGSKDVANAGILLIS-GLQSEDEADYYCM 119  
 AAW69108 29 SQS-VGS-----D-LVWYQORPGQAPRLLIYRASL----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY-- 90  
 AAV40707 32 SQN-IGN-----Y-LSWYQOKPGRAPKLLIYDAST----LQDGVPARFSGS--GSGTDFTLTIS-SLQPEDFATYY-- 93  
 AAD27544 26 SQS-VSS-----N-LAWYQOKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLAIIS-SLQSEDFAVYY-- 87  
 AEO16798 45 SSN-IGA-----D-YDVYWYQHLPGTAPKLLMYGDGY----RPSGVDRFSGS--KSGTSASLAIIT-GLQAEDADYYCQ 110  
 AAK94860 26 SQS-VSS-----N-LAWYQOKPGQAPRLLIYDAST----RATGIPAKFSAS--GSGTDFTLTIS-SLQSEDFAVYY-- 87  
 1603260B 26 SQG-IRN-----D-LGWYQOKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYY-- 87  
 AAW69207 26 SQS-VSS-----YLAWYQOKPGQAPRLLIYDTSN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY-- 87  
 ABC67104 28 SQS-ISS-----W-LAWYQOKPGKAPKLLIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLQPDFFATYY-- 89

ABU90574	26	--N-IG-----G-KTVHWYQKPGQAPVLVYVYDSD---- <td>88</td>	88
AAA58917	46	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----KATGVPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	107
AAM46646	48	SQR-IST-----Y-LNWXQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIT-SLQPDDFATYY--	109
ABA70799	30	SQS-IFT-----W-VAWYQKAGQAPRLLIYKAST----LESGVPSRFSGS--GSGTDFILTIS-SLQPDDVATYY--	91
AAW69029	26	SQS-VSS-----YLAWYQKPGQAPRLLIYDVST----RAAGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
AAC97102	26	SQD-INN-----Y-LNWXQKPGKTPKLLIYGASN----LETGVPSRFSGS--GSGTDFIFTIS-SLQPEDIATYY--	87
ABA71378	26	SQS-VDS-----RYLAWYQKPGQAPRLVIHGASS----RATGIPDRFSGS--GSGTEFTLTIS-RLEPEDFAVYY--	88
ACF34424	26	SSN-IG-----R-NTVNWYQHLPGTAPKLLIYGNNE----RPSGVDRFSGS--KSGTSASLAIS-GLRSEDEADYFCA	90
ABU90600	26	SQG-INN-----N-LAWFQKPGKAPKSLIYAASS----LQGGVPSKFSGS--GSGTDFNLTIS-SLQPEDFATYY--	87
ABI74147	26	SQS-VTS-----N-LAWYQKPGQAPRLLIHGAST----RASGVPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
3UJI_L	26	--I-LG-----D-KYVSWYQKSGQSPLLVIYEDTK----RPSGIPDRFSGS--KSGNTATLTIS-GTQAMDEADYYCQ	88
ABG77645	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----GATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
ABC67129	28	SQS-ISS-----Y-LNWXQKPGKAPKLLIYVASN----LHSGVPSRFSGS--GSGTDFSLTIN-ILQPEDFATYY--	89
CAD43024	26	SQS-VSS-----NYLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-SLQSEDFAVYY--	88
AAW69261	26	SQS-VTA-----K-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
ADU32604	26	SKS-ISS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
S25742	42	SSN-IG-----N-NYVSWYQQLPGRAPKLLIFENNK----RPSAIPDRFSGS--KSGTSATLGIA-GLQTGDEADYYCG	106
ABA26134	26	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
ABA70845	26	SQR-ISS-----NSLAWYQKPGRAPRLVIYATSS----RATGIPDRISGS--GSGTDFTLTIS-RLEPEDFAVYY--	88
AAC64146	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
BAD90940	24	SQS-VRN-----YLAWYQKPGQAPRLLIYGASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	85
AAA51019	48	SQT-IAT-----F-LNWXQKPGKAPKLLIYGASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	109
AAD16595	19	SQS-VSG-----N-LAWYQKPGQAPRLLIHGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	80
ABC67122	28	TQS-ISK-----Y-LNWXQKPGQAPKVLIIYGAST----LEGGVPSRFNGS--GSGTDFTLIIS-SLQPEDFATYY--	89
CAA85585	26	SQS-INS-----Y-LNWXQKPGKAPKLLIYAASS----LESGVPSRFSGS--ESGTFDLTIS-SLQPEDFATYY--	87
BAC01776	48	SSN-IGN-----N-Y-VSWYQQLPGTAPKLLIYDNNK----RPSGIPDRFSGSK--SGTSATLGIT-GLQTGDEADYYCG	112
CAC85285	27	--N-IG-----R-KSVHWYQQRPGQAPLLLVYDDGD----RPSGIPDRFSGS--NSESAATLTIS-MVAPADEADYFCQ	89
AAW69214	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPGRFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
AAW69097	29	SQS-VSS-----YLAWYQRRPGQAPRLLIYDVST----RAAGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	90
BAD27497	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
CAD48510	26	SQS-VRS-----N-LVWYQKPGQAPRLLIYDASN----RASGVPPRFSGS--GSGTDFTLTIS-SLQSEDFAVYY--	87
CAA85596	26	SQT-INS-----HYLAWYQKPGQAPRLLIYDASS----RATGVDRFSGS--GSGTDFILTIS-GLEPEDFAVYY--	88
CAA85598	26	SQS-VSR-----SQLAWYQKSPGQAPRLLIYDASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	88
ABU90732	26	--N-LG-----D-QYACWYQKPGQSPVLIYQDNK----RPSGIPERFSGS--NSGDTATLTIS-GTQSTDEADYFCQ	88
AAC41920	22	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	83
AAD29271	26	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
S25747	45	--N-IA-----S-KSVHWYQKPGQAPVLVYVYDSD----RPSGIPERFSGS--NSGNTATLNIS-RVEAGDEAAYYCQ	107
ABV22589	21	RSN-IR-----S-GFVSWYQVPGTAPKVLINRNDQ----RPSGVDRFSGS--KSGTSATLAIS-GLRSEDEADYYCA	85
ACR16246	26	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
3G01_L	26	--A-LS-----N-QYAYWYRQRPGQAPLLIYKDTK----RPSGIPERFSGS--TSGTTVTLTIS-GVQAEDEADYYCQ	88
AAO17826	45	--N-IE-----Y-RSVHWYQKSGQAPVAVIYDNSD----RPSGIPERFSGS--KSGNTATLTIS-RVEAGDEADYYCQ	107
CAC44147	24	SQS-ITS-----Y-LNWXQKLGKAPKLLIYAASR----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	85
2FL5_L	26	--V-LP-----K-KYAYWYQERSGQAPVLVYVYEDSG----RPSEIPERFSGS--SSGKATLTIS-GAQVEDEADYYCY	88
S40371	23	SQS-LLY-STG-Y-NYLDWYLQKPGKSPQLLIYLGSK----RASGVDRFSGS--GSGTDFTLKIS-RVEAEDVGVYYCM	91
ADU32608	26	SQS-VSH-----YLAWFQKPGQPPRLLIYDVST----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
BAC01775	48	SSN-IGN-----N-Y-VSWYQQLPGTAPKLLIYDNNK----RPSGIPDRFSGSK--SGTSATLGIT-GLQTGDEADYYCG	112
ABC66978	28	SQS-ISS-----W-LAWYQKPGKAPKLLIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYY--	89

BAC55089 26 --A-LP-----K-KYAYWYQKSGQAPVLVIYEDSK----RPSGIPERFSGS--SSGTMATLTIS-GAQVEDEADYYCY 88  
 AAW69085 26 SHS-VSS-----YLAWYQKPGQAPRLLIYDAST----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY-- 87  
 AAH73787 45 --N-IG-----S-KSVHWYRQKPGQAPMLVVYDDSA----RPSGIPERFSGS--ASENTATLTIS-GVEAGDEADYYCQ 107  
 AAR88382 26 SSN-IG-----N-NDVSWYQOPGTVPKLVYENNO----RPSGIPDRFSGS--KSGTSATLTGIT-GLQTGDEADYYCG 90  
 LLIL\_A 25 --K-LG-----D-AYVCWYQOPGQSPVVVIYQDNR----RPSGIPERFSGS--SSGNTATLTIS-GTQTLDEADYYCQ 87  
 ADU32607 26 SQS-VRF-----YLAWYQKPGQAPRLLIYDAST----RATGIPARFSGS--GSGTDFSLTIS-SLETEDFAVYY-- 87  
 ABA70797 30 SQS-ISS-----W-LAWYQKPGKAPKLLIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYY-- 91  
 AAW69280 26 SQS-VSS-----N-LAWYQHKPGQAPRLLIYGAST----RATGIPGRFSGS--GSGTEFTLTIS-SLQSEDFAVYY-- 87  
 AAT96435 26 SQS-VSS-----K-LAWYQKPGQAPRLVYVYGAST----RATGIPARFSGS--GSGTEFTLTIN-SMESEDFAVYY-- 87  
 AAZ09058 26 SQT-VGS-----S-LAWYQKPGQAPRLLIYGAST----RATGIPARFSAS--RSGTEFTLTIS-SLQSEDFAVYY-- 87  
 BAC01826 49 GIN-VGT-----Y-K-IYWYQKPGSPQYLLRYSNSDSRQOASGVPSRFSGSKDASANAGILLIS-GLQSEDEADYYCM 119  
 ABU90584 26 SSD-IGG-----Y-NYVSWYQHPGKAPKLIYEVSN----RPSGVSNRFSGS--KSGNTASLTIS-GLQAEDEADYYCN 91  
 P04207 46 SQS-VSN-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-RLQSEDFAVYY-- 107  
 ACF34443 26 --K-LG-----N-EYACWYQKPGQSPVVVIYQDTK----RPSGIPERFSGS--NSGNTATLTIS-GTQTMDEADYYCQ 88  
 ACF34427 26 SSN-IE-----N-NYVSWYQOLPGTAPKLLIYDTNK----RPSGIPDRFSGS--KSGTSATLDIA-GLQTGDEADYYCG 90  
 BAC01596 26 SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIFFSLEPEDFAVYY-- 88  
 ADU57744 26 SQS-VRR-----SLAWYQKPGQAPRLLIYDASN----RATDIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY-- 87  
 ABA70774 36 SQS-ISS-----Y-LNWYQKPGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY-- 97  
 AAB25742 26 SQS-ISS-----W-LAWYQKPGKAPKLLIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYY-- 87  
 AAG43503 26 SQS-VTS-----SLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY-- 87  
 AAW69249 26 SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY-- 87  
 BAC87479 46 SQS-VGT-----T-VAWYQKPGQAPRLLIYGAST----RAADIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY-- 107  
 ADU57763 26 SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY-- 87  
 AAP34743 26 SQT-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY-- 87  
 AAD19498 24 SQS-VSG-----N-LAWYQKPGQAPRLLIYDAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY-- 85  
 AAY16626 26 SQS-VSS-----YLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY-- 87  
 ABU90561 26 --K-LG-----D-TYTCWYQKPGQSPLLVIYQDNK----RPSGIPERFSGS--NSGNTATLTIS-GTQALDEADYFCQ 88  
 AAP34742 26 SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGG--GSGTEFTLTIS-SLQSEDFALYY-- 87  
 AAR84234 26 SQR-VSL-DSN-NKNYLAWYQHQPQAPRLLIYWAST----RESGVPDRFSGS--GSGTDFTLTIN-SPQAEDVAVYYCQ 95  
 AAT96436 26 SQS-IKS-----D-LAWYQKPGQAPRLVYVYGAST----RATGIPARFSGS--GSGTEFTLTIN-SMESEDFAVYY-- 87  
 AAW69188 26 SQS-VSN-----N-LVWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY-- 87  
 CAG17618 26 SQS-VGS-----YLDWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY-- 87  
 CAA06600 48 SDS-IGT-----N-LAWYQQRPGQAPRLVIFAAT----RASAPPRFSGG--GSGTEFTLTISIT-SLQPADVAVYY-- 109  
 ABA71387 26 SQN-ITT-----Y-LNWYQQRSGSAPKLLIYVSN----LQSGVPSRFSGS--GSGTDFTLTSS-SLQPEDFATYY-- 87  
 AAW69082 26 SQS-ISR-----H-LAWYQKPGQAPRLLIYGASN----RATGIPPRFSGS--GSGTEFTLTIS-SLQSEDFAVYY-- 87  
 ADU32643 26 SEG-ISS-----H-LAWYQQRPGQAPRLLIYGAST----RATGIPARFRGS--GSGTDFTLTIS-SVQSEDFAVYY-- 87  
 AAW69231 26 SQS-VST-----YLAWYQHKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY-- 87  
 ABA26240 26 SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY-- 87  
 AAK94802 26 SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY-- 87  
 AAT96434 26 SQS-VSS-----K-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY-- 87  
 BAC01828 49 GIN-VGT-----Y-R-IYWYQKPGSPQYLLRYSKSDSKQOQSGVPSRFSGSKDASANAGILLIS-GLQSEDEADYYCM 119  
 ABG38408 28 SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RAAGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY-- 89  
 AAA36085 46 SQS-VSS-----SYLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY-- 108  
 AAO11855 41 SQS-IST-----W-LAWYQKPGKAPKILYKASI----LESGVPSRFSGS--GSGTEFTLTIS-SLQPDDFATYY-- 102  
 AAW69089 29 SRS-VAS-----YLAWYQKPGQAPRLLIYDAST----RAIGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY-- 90  
 BAC01769 48 NSN-IEK-----N-D-VSWYQQPGAAPKLLISDTR----RPSGIPDRFSGSK--SGTSATLAI-GLQAEDEADYYCQ 112  
 AAC97100 26 SQD-ISN-----F-LAWFQKPGNAPKSLIYAASS----LQSGVPSKFSGS--GSGTNFTLTIS-SLQPEDFATYY-- 87

AAO11857	41	SQS-IGS-----Y-LNWXQKPKGKAPKVVIIYAANV----LQSGVPSRFSGS--GSGTDFTLTIS-SQPEDFATYY--	102
ABA26089	26	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
CAA29935	46	SQS-VSS-----SYLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	108
BAC01802	48	DV---GG-----K-S-LHWYQKPGQAPVLVVFDDRD----RPSGIPERFSGTN--SRDTAALTIS-RVEAGDEADYYCQ	110
AAA69014	39	SQS-ISS-----W-LAWYQKPKGKAPQLLMYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLHPDDFATYF--	100
BAC01793	48	AL---PK-----K-Y-AYWYQKSGQAPVLVIYEDSK----RPSGIPERFSGS--SGTMATLTIS-GAQVEDEADYYCY	110
ABA26105	26	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
AAL96535	24	SQS-VGS-----FLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDSAVYY--	85
AAL37877	26	SQN-IDS-----YLIWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAIYY--	87
AA166630	28	SQS-IST-----W-LAWYQKPKGKAPKLLIQTASR----LESGVPSRFSGS--GSETDFTLTIS-SLQPEDFATYY--	89
ABC67110	28	SQD-IST-----W-LAWYQKPKGKAPKLLISAAYT----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	89
AAH75843	45	SSN-IGI-----N-Y-VYWYQKIPGTAPKLLISTNDQ----RPSGVPDRFSGS--KSGTSASLAIG-GLRSEDEAHYYCA	109
AAB26307	24	SQS-VGT-----N-LAWYQKPGQAPRLLIFDAST----RDYIPDTFSGS--GSGTDFALTIS-SLQSEDFGFYY--	85
AA166623	26	SQS-VSS-----SYLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	88
ABU90640	26	NFN-VG-----R-NTVQWYQVPGSAPKLLIYADDQ----RLSGVPDRFSGS--KSGTSASLAIS-GLHSEDEAAYSCA	90
AAA58972	39	SQS-ISS-----W-LAWYQKPKGKAPKLLIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYY--	100
ABA26202	26	SQS-VRS-----NLAWYQKPGQAPRLLIYDASK----RATGIPARFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	87
AAW69048	26	SRS-VAS-----YLAWYQKPGQAPRLLIYDAST----RAIGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
ABG38341	28	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	89
AAT96423	26	SQS-VST-----YLAWYQKAGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
AAW69233	26	SQS-VTS-----N-LAWYQKPGQAPRLLIYVAST----RATGIPDRFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
AAW69044	26	SHS-VSS-----YLAWYQKPGQAPRLLIYDAST----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
ABA70846	26	SQS-VSS-----SYLAWYQKPGQAPRLLIYGASR----RATGIPDRFSGS--GSGTVFTLTIS-RLEPEDFAVYY--	88
AAA18820	26	SQS-VSN-----N-LAWYQKSGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLAIS-GLQSEDFAVYY--	87
AAO22176	15	SQS-ISG-----N-LNWXQLKPKGKAPPELLIYAASS----LQSGVPSRFSGT--ASGTDFAIIIS-SLQPEDFATYY--	76
AAD16558	14	SQS-VSS-----N-LAWYQKPGQAPRLLIYDAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	75
ABG38361	26	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
JE0247	25	--N-LG-----T-RNVHWYQKPGQAPVLVLYDYNV----RPSGIPERFSGS--NSVTAATLAIS-EVEAGDEADFYCW	87
AAG43504	26	SQS-VSR-----NLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
AAC41987	26	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
AAW69086	26	SHS-VSS-----YLAWYQKPGQAPRLLIYDAST----RATGIPARFSGS--GSGTDFTLTVS-SLEPEDFAVYY--	87
CAG27038	26	SQD-ISN-----Y-LNWXQKPKGKAPKLLIYDASN----LETGVPSRFSGS--GSGTDFFTTIS-SLQPEDIATYY--	87
2107296A	45	SSD-VGS-----Y-NLWSWYQHPGKAPKLMIEGSK----RPSGVSIIRFSGS--KSGNTASLTIS-GLQAEDEADYYCC	110
ABA70775	36	SQS-ISS-----Y-LNWXQKPKGKAPKLLIYAASS----LQSGVPSRFSGS--GSGTDFTLTIS-SLQPEDFATYY--	97
AAA72132	46	SQS-IFY-ASN-NKDYLAWYQKPGQPPKLLIYWASA----RESGVPDRFSGG--GSGTDFTLTIS-SLQAEDEVAVYYCQ	115
BAA22186	28	SQS-VGS-----YLAWYQKPGQAPRLLIYGASS----RATGIPDRFSGS--GSGTDFTLTIS-RLEPEDFAVYY--	89
AAC99691	18	SQS-VLY-SSN-NKNYLAWYQKLGQPPKLLIYWAST----RESGVPDRFSGS--GSGTNFTLTIS-SLQAEDEVAVYYCQ	87
ADT82679	26	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
AAZ09079	26	SQS-VSS-----YLAWYQKPGQVPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
CAG27041	26	SQD-IGN-----S-LNWXQKPKGKAPKLLIYDIFN----LETGVPSRFSGD--GSGTEFTTIS-SLQPEDFATYY--	87
ABC66981	28	SQS-ISS-----W-LAWYQKPKGKAPNLLIYWASS----LETGVPSRFSGS--GSGTEFTLTIS-SLQPEDFATYY--	89
ACF34439	26	SGP-IAS-----NYVQWYQQRPGSAPTTVIYEDNQ----RPSGVPRFSGSIDTSSNSASLTIS-GLKTEDEADYYCQ	92
ABA26106	26	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
S25753	45	--K-LG-----D-KYSSWYQKPGQSPLLVLYQDNT----RPSGIPERFSGS--NSGNTATLTIS-ETQAMDEGDYYCQ	107
AAA16949	26	SQS-VSS-----N-LAWYQKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
752399A	26	SSD-VGA-----Y-NSVSWYQHPGKAPKLMIFDVTK----RPSGVPDRLSGS--KSGDTASLTIS-GLRADDEADYYCC	91
ABA26087	25	SQS-VSS-----YLAWYQKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	86

AAW69075	26	SRS-VAS-----YLAWYQOKPGQAPRLLIYDAST----RAIGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
BAC01825	49	DVN-VGT-----Y-K-IYWYQOKPGSPPPQYLLRYNSDSKQGGSGVPSRFSKGDASANAGVLLIS-GLQSEDEADYYCM	119
AAZ09128	22	SQS-VSS-----YLAWYQOKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	83
AAQ55271	24	SQR-VSG-----N-VVWYRQKPGQSPRLLIYAASST----RASGVPARFSGS--GSGTDFNLTIN-SLQSDDIADVYY--	85
ACR16321	26	SQS-VSS-----N-LAWYQOKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	87
AAH73795	45	SSN-IGA-----N-N-VNWYQQLPGTAPKLLIHTTNQ----RPSGVPERFSGS--KSGPSASLVIS-GLQSEDEAEYYCA	109
AAB53471	26	SQS-ISS-----S-LAWYQOKPGQAPRLLIYGASS----LQSDVPARFSGS--GSGTDFTLTIS-SLQSEDFATYY--	87
ABG38377	26	SQR-VSS-----YLAWYQOKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
AAL96537	24	SQS-VSS-----YLAWYQOKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	85
AAC08337	26	SQS-VSS-----YLAWYQOKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
AAB84164	23	SQS-VST-----FLAWYQOKPGQAPRLLIYDAST----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	84
AAD56265	26	SQS-ISS-----N-LAWYQOKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAIYH--	87
AAD19449	24	SQS-VSF-----N-LAWYQOKPGQAPRLLIFGAST----RATGIPARFSGS--GSGTEFTLTIF-SLQSEDFAVYY--	85
CAB44484	22	SQS-VNN-----N-FAWYQOKPGQAPRLLIYGAST----RATGIPARFSGS--GSGTEFTLTIS-SLQSEDFAVYY--	83
BAC01851	49	GIN-VGT-----Y-R-IYWYQOKPGSPPPQYLLRYKSDSKQGGSGVPSRFSKGDASANAGILLIS-GLQSEDEADYYCM	119
ADT82680	26	SQS-VSS-----YLAWYQOKPGQAPRLLIYDASN----RATGIPARFSGS--GSGTDFTLTIS-SLEPEDFAVYY--	87
ABA70793	30	SQS-ISS-----W-LAWYQOKPGKAPKLLIYKASS----LESGVPSRFSGS--GSGTEFTLTIS-SLPDDFATYY--	91
AAV16609	26	SQS-VLY-SSN-NKNYLAWYQOKPGQPPKLLIYWAST----RESGVPDFRSGS--GSGTDFTLTIS-SLQAEADVAVYYCQ	95
S25750	45	SSN-IG-----T-NDVYWYQQLTGTAPKLLIYRNNQ----RPSGVPDFRSGS--KSGSSASLAIS-GLQSEDEADYYCA	109