

Table S1. Amino acid sequences of 10E8 variants.

Heavy chain

| | | | | | | | | | | |
|--------------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|-----|
| | 5 | 15 | 25 | 35 | 45 | 52C | 62 | 72 | 82 | 84 |
| 10E8 | EVQLVESGGG | LVKPGGSLRL | SCSASGDFD | NAWMTWVRQP | PGKGLEWVGR | ITGPGEGWSV | DYAAPVEGRF | TISRLNSINF | LYLEMNLRM | |
| HC6 | .R.A. | . | . | . | . | . | . | . | . | . |
| HC6-S74W | .R.A. | . | . | . | . | . | . | W | . | . |
| HC6-S74Y | .R.A. | . | . | . | . | . | . | Y | . | . |
| HC6-S74Y-DKTT | .R.A. | . | . | . | . | . | . | D.YK.T | . | T |
| H6 | .R. | . | N. | D. | . | S. | . | ES.K. | . | V.T |
| H6-DTKT | .R. | . | N. | D. | . | S. | . | ES.K. | D.TK.T | V.T |
| H6-DTKT-DNTY | .R. | . | . | . | . | . | . | ES.K. | D.TK.T | V.T |
| H6-DTKT-DNTY-LS | .R. | . | . | . | . | . | . | ES.K. | D.TK.T | V.T |
| H6-DTKT-DNTY-Y100e | .R. | . | . | . | . | . | . | ES.K. | D.TK.T | V.T |
| H8 | .R. | R | . | N. | . | . | . | S.K. | M. | F. |
| H8-DYKT | .R. | R | . | N. | . | . | . | S.K. | D.YK.T | F. |
| | 89 | 99 | 101I | 107 | 117 | 127 | 137 | 147 | 157 | |
| 10E8 | EDSGLYFCAR | TGKYDFWSG | YPPGEEYQD | WGRGTLVTS | SASTKGPSVF | PLAPSSKSTS | GGTAALGCLV | KDYFPEPVTV | SWNSGALTS | |
| HC6 | . | . | . | I. | . | . | . | . | . | |
| HC6-S74W | . | . | . | I. | . | . | . | . | . | |
| HC6-S74Y | . | . | . | I. | . | . | . | . | . | |
| HC6-S74Y-DKTT | . | . | . | I. | . | . | . | . | . | |
| H6 | .T.Y. | H. | . | Q. | I. | . | . | . | . | |
| H6-DTKT | .T.Y. | H. | . | Q. | I. | . | . | . | . | |
| H6-DTKT-DNTY | .T.Y. | . | . | Q. | I. | . | . | . | . | |
| H6-DTKT-DNTY-LS | .T.Y. | . | . | Q. | I. | . | . | . | . | |
| H6-DTKT-DNTY-Y100e | .T.Y. | . | C. | Q. | I. | . | . | . | . | |
| H8 | .T. | H.A. | G. | LE. | Q. | I. | . | . | . | |
| H8-DYKT | .T. | H.A. | G. | LE. | Q. | I. | . | . | . | |
| | 167 | 177 | 187 | 197 | 207 | 217 | 227 | 237 | 247 | |
| 10E8 | VHTFFAVLQS | SGLYSLSSVV | TVPSSSLGTQ | TYICNVNHPK | SNTKVDKKVE | PKSCDKTHTC | PPCPAPELLG | GPSVFLFPPK | PKDTLMISRT | |
| HC6 | . | . | . | . | . | . | . | . | . | |
| HC6-S74W | . | . | . | . | . | . | . | . | . | |
| HC6-S74Y | . | . | . | . | . | . | . | . | . | |
| HC6-S74Y-DKTT | . | . | . | . | . | . | . | . | . | |
| H6 | . | . | . | . | . | . | . | . | . | |
| H6-DTKT | . | . | . | . | . | . | . | . | . | |
| H6-DTKT-DNTY | . | . | . | . | . | . | . | . | . | |
| H6-DTKT-DNTY-LS | . | . | . | . | . | . | . | . | . | |
| H6-DTKT-DNTY-Y100e | . | . | . | . | . | . | . | . | . | |
| H8 | . | . | . | . | . | . | . | . | . | |
| H8-DYKT | . | . | . | . | . | . | . | . | . | |
| | 257 | 267 | 277 | 287 | 297 | 307 | 317 | 327 | 337 | |
| 10E8 | PEVTCVVVDV | SHEDPEVKFN | WYVDGVEVHN | AKTKPREEQY | NSTYRVVSVL | TVLHQDWLNG | KEYKCKVSNK | ALPAPIEKTI | SKAKGQPREP | |
| HC6 | . | . | . | . | . | . | . | . | . | |
| HC6-S74W | . | . | . | . | . | . | . | . | . | |
| HC6-S74Y | . | . | . | . | . | . | . | . | . | |
| HC6-S74Y-DKTT | . | . | . | . | . | . | . | . | . | |
| H6 | . | . | . | . | . | . | . | . | . | |
| H6-DTKT | . | . | . | . | . | . | . | . | . | |
| H6-DTKT-DNTY | . | . | . | . | . | . | . | . | . | |
| H6-DTKT-DNTY-LS | . | . | . | . | . | . | . | . | . | |
| H6-DTKT-DNTY-Y100e | . | . | . | . | . | . | . | . | . | |
| H8 | . | . | . | . | . | . | . | . | . | |
| H8-DYKT | . | . | . | . | . | . | . | . | . | |
| | 347 | 357 | 367 | 377 | 387 | 397 | 407 | 417 | 427 | |
| 10E8 | QVYTLPPSRD | ELTKNQVSLT | CLVKGFPYPSD | IAVEWESNGQ | PENNYKTPPP | VLDSDGSFFL | YSKLTVDKSR | WQQGNVFCSS | VMHEALHNHY | |
| HC6 | . | . | . | . | . | . | . | . | . | |
| HC6-S74W | . | . | . | . | . | . | . | . | . | |
| HC6-S74Y | . | . | . | . | . | . | . | . | . | |
| HC6-S74Y-DKTT | . | . | . | . | . | . | . | . | . | |
| H6 | . | . | . | . | . | . | . | . | . | |
| H6-DTKT | . | . | . | . | . | . | . | . | . | |
| H6-DTKT-DNTY | . | . | . | . | . | . | . | . | . | |
| H6-DTKT-DNTY-LS | . | . | . | . | . | . | . | . | L.S. | |
| H6-DTKT-DNTY-Y100e | . | . | . | . | . | . | . | . | . | |
| H8 | . | . | . | . | . | . | . | . | . | |
| H8-DYKT | . | . | . | . | . | . | . | . | . | |
| | 437 | | | | | | | | | |
| 10E8 | TQKSLSLSPG | K | | | | | | | | |
| HC6 | . | . | . | . | . | . | . | . | . | |
| HC6-S74W | . | . | . | . | . | . | . | . | . | |
| HC6-S74Y | . | . | . | . | . | . | . | . | . | |
| HC6-S74Y-DKTT | . | . | . | . | . | . | . | . | . | |
| H6 | . | . | . | . | . | . | . | . | . | |
| H6-DTKT | . | . | . | . | . | . | . | . | . | |
| H6-DTKT-DNTY | . | . | . | . | . | . | . | . | . | |
| H6-DTKT-DNTY-LS | . | . | . | . | . | . | . | . | . | |
| H6-DTKT-DNTY-Y100e | . | . | . | . | . | . | . | . | . | |
| H8 | . | . | . | . | . | . | . | . | . | |
| H8-DYKT | . | . | . | . | . | . | . | . | . | |

Continues...

Table S1 (continued). Amino acid sequences of 10E8 variants*.

Light chain

| | | | | | | | | | |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | | | | | | | | |
| | 5 | 16 | 26 | 36 | 46 | 56 | 66 | 76 | 86 |
| 10E8 | SYELTQETGV | SVALGRTVII | TCRGDSLRS | YASWYQKKPG | QAPILLFYGK | NNRPSGVPDR | FSGSASGNRA | SLTISGAQAE | DDAEYCSSR |
| L3 |D... | ..... | ..... | ..... | ..V..... |I... |T..... | ..E.D..... | ..... |
| L3-ASPAKQ | AS...DPA. | ...KQ... | ..... | ..... | ..V..... |I... |T..... | ..E.D..... | ..... |
| L3-ASPAKQ-S30C | AS...DPA. | ...KQ... |C. | ..... | ..V..... |I... |T..... | ..E.D..... | ..... |
| L10 | AS...DPA. | ...KQ... | ..... | ..... | ..V.V..... |I... | ...S..T. | ...A..... | ...D..... |
| | | | | | | | | | |
| | 95A | 103 | 113 | 123 | 133 | 143 | 153 | 163 | 173 |
| 10E8 | DKSGSRLSVF | GGGTKLTVLS | QPKAAPSVTL | FPPSSEELQA | NKATLVCLIS | DFYPGAVTVA | WKADSSPVKA | GVETTTPSKQ | SNNKYAASSY |
| L3 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| L3-ASPAKQ | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| L3-ASPAKQ-S30C | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| L10 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | | | | | | | | |
| | 183 | 193 | 203 | 213 | | | | | |
| 10E8 | LSLTPEQWKS | HRSYSCQVTH | EGSTVEKTVA | PTECS | | | | | |
| L3 | ..... | ..... | ..... | ..... |  |  |  |  |  |
| L3-ASPAKQ | ..... | ..... | ..... | ..... |  |  |  |  |  |
| L3-ASPAKQ-S30C | ..... | ..... | ..... | ..... |  |  |  |  |  |
| L10 | ..... | ..... | ..... | ..... |  |  |  |  |  |

* 10E8 variants comprised the following heavy and light chain combinations:
 10E8v1: HC6-S74Y-DKTT/L3
 10E8v4: H6-DTKT-DNTY/L3-ASPAKQ
 10E8v4-LS: H6-DTKT-DNTY-LS/L3-ASPAKQ
 10E8v4-DS: H6-DTKT-DNTY-Y100eC/L3-ASPAKQ-S30C
 10E8v5: HC6-S74Y-DKTT/L3-ASPAKQ