

5F9 scFv

GAAATAGTGATGACCGCAGAGCCCCGCCACCTGAGTGTCTCCAGCGAGAGAGCCACCTGTCTGTAGAGCCAGCCAGAGCGTGTCCAGAAACCTGGCCTGGTATCAGCAGAAGCCCGCCAG
E I V M T Q S P A T L S V S P G E R A T L S C R A S Q S V S R N L A W Y Q Q K P G Q
5F9 scFv

GCTCCAGACTGCTGATCTACGGCGCCAGCACAAAGCCACAGGCATCCCCGTAGATTACGGCTCTGGCAGCGGCACCAGTTACCCCTGACAATCGGCAGCCTGCAGAGCGAGGACTTCGCC
A P R L L L I Y G A S T R A T G I P A R F S G S G S G T E F T L T I G S L Q S E D F A
5F9 scFv

GTGTACTACTGCCAGCAGTACAAGACCTGGCCAGAACCTTGGCCAGGGCACCAAGTGGAAATCAAGGCTAGCGGCGGAGGCGGATCTGGCGGAGGGGAAGTGGCGGGGAGGATCTGGGGG
V Y Y C Q Q Y K T W P R T F G Q G T N V E I K A S G G G G S G G G G S G G G G S G G G G S G G
5F9 scFv

GGAGGCTCTGAGCTCCAGGTGCAACTGCAGCAGTGGGGCGCTGGACTGCTGAAGCCTAGCGAGACACTGAGCCTGACCTGCCTGTGTTCCGGCGCAGCTTCTCCGGCTACTACTGGTCTGGATC
G G S E L Q V Q L Q Q W G A G L L K P S E T L S L T C A V F G G S F S G Y Y W S W I
5F9 scFv

AGACAGCCCCCTGGCAAGGGCCTGGAATGGATCGGCAGATCAACCACAGAGGCAACACCAACGACAAACCCAGCCTGAAGTCCAGAGTGACCATCAGCGTGGACACCAAGCAAGAACCGATTGCC
R O P P G K G L E W I G E I N H R G N T D N P S L K S R V T I S V D T S K N Q F A
5F9 scFv

CTGAAGCTGAGCAGCGTGACAGCGCCGATACCGCTGTGTACTATTGCGCCAGAGAGAGGGCTACACCTACGGCAACTTCGACCCTGGGGCCAGGGAAACCTGGTCAACCGTCTCCTCA
L K L S S V T A A D T A V Y Y C A R E R G Y T Y G N F D H W G Q G T L V T V S S
5F9 scFv

1D3 scFv

GACATCCAGATGACCCAGAGCCCTGCCAGCCTGTCTACCGCCTGGCGAGACAGTGACCATCCAGTGTCCAGGCGAGCGAGGACATCTACTCTGGCCTGGTGGTATCAGCAGAAGCCCGCAAG
D I Q M T Q S P A S L S T S L G E T V T I Q C Q A S E D I Y S G L A W Y Q Q K P G K
1D3 scFv

AGCCCTCAACTGCTGATCTACGGCGCCAGCGACCTGCAGGACGGCGTGCCTAGCAGATTACGGCGCAGCGGCTCCGGAACCCAGTACAGCCTGAAGATCACCAGTATCGAGACCGAGGACGAGGGC
S P Q L L I Y G A S D L Q D G V P S R F S G S G S G T Q Y S L K I T S M Q T E D E G
1D3 scFv

GTGTACTTCTGCCAGCAGGCGCTGACCTACCTAGAACCCTTGGAGGAGGACCAAGCTGGAACCTGAAGGGCGGAGGCGGAAAGTGGAGGCGGAGGATCTGGCGCGGAGGCTCTGAAGTGAACCTG
V Y F C Q Q G L T Y P R T F G G G T K L E L K G G G G S G G G G S G G G S E V Q L
1D3 scFv

CAGCAGTCTGGCGCTGAACCTGGTCCGGCCTGGCAGTACGCTGAAGCTGTCTGCAAGGTTCCGGCGACACCATCACCTTCTACTACATGCACCTTCTGTAAGCAGAGGCCAGGACAGGGCCTGGAA
Q Q S G A E L V R P G T S V K L S C K V S G D T T I T F Y Y M H F V K Q R P G Q G L E
1D3 scFv

TGGATCGGCAGAACTGACCCCTGAGGACGAGAGCACCAAGTACAGCGAAGGTTCAAGAACAGGCCACCCCTGACCGCCGACACCAAGCAGCAACACCCCTACCTGAAGCTGTCTAGCCTGACCTCC
W I G R I D P E D E S T K Y S E K F K N K A T L T A D T S S N T A Y L K L S S L T S
1D3 scFv

GAGGACACCGCCACCTACTTTTGCATCTACGGCGGCTACTACTTCGACTACTGGGGCCAGGGCGTGTGGTCAACCGTGTCCAGC
E D T A T Y F C I Y G G Y F D Y W G Q G V M V T V S S
1D3 scFv

4D5 scFv

GATATTGTGATGACTCAGTCCCACAAATTCATGAGCACCTCTGTGGCGATCGAGTGTCTATCACCTGTAAGGCATCCCAGGATGTGAACACTGCTGTGGCTTGGTACCAGCAGAAGCCCGCCAT
D I V M T Q S H K F M S T S V G D R V S I T C K A S Q D V N T A V A W Y Q Q K P G H
4D5 scFv

AGCCCAAACTCCTCATCTACTCCGCTCATTTCCGGTACACTGGAGTGCCTGACCGGCTTTACTGGCAATCGCTCTGGAACCGACTTTACAATCTCCTCCGTCAGGCGGAGGATCTGGCTGTCTAC
S P K L L I Y S A S F R Y T G V P D R F T G N R S G T D F T I S S V Q A E D L A V Y
4D5 scFv

TACTGTCCAGCAGCACTACACAACACCTCCAACCTTTGGCGGGGAAACAAAAGTGAATCAAGGCTAGCGGCGGAGGCGGCTCCGGCGGAGGCGGAGTGGCGGCGGAGGATCTGGAGGCGGCGGA
Y C Q Q H Y T T P P T F G G G T K V E I K A S G G G G S G G G G S G G G S G G G S G G G
4D5 scFv

TCTGAGCTCGCTTACGGACAGGTCACGCTCCAGCAGTCTGGCCCTGAACTGGTGAACCTGGGGCTTCTGAAACTGTCTGTACTGCCTCTGGCTTCAACATTAAGGACACCTACATTCACTGG
S E L A Y G Q V Q L Q Q S G P E L V K P G A S L K L S C T A S G F N I K D T Y I H W
4D5 scFv

GTCAAAACAGCGACCTGAGCAGGGACTCGAATGGATTGGGAGGATCTACCCACAAAAGGCTACACCGCTACGATCCAAAATTCAGGACAAAGCCACAATCACCGCCGATACTAGTAGCAATACC
V K Q R P E Q G L E W I G R I Y P T N G Y T R Y D P K F Q D K A T I T A D T S S N T
4D5 scFv

GCTTACCTCCAGGTGTACCACTCACATCTGAGGATACTCCGGTGTACTACTGTTCTCGATGGGGAGGCGACGGCTTTTACGCTATGGACTACTGGGGACAGGGAGCTTCTGTGACTGTGTCTAGC
A Y L Q V S R L T S E D T A V Y Y C S R W G G D G F Y A M D Y W G Q G A S V T V S S
4D5 scFv

Supplementary Figure S2. scFv sequences.