

The Humanization and Maturation of an Anti-PrPc Antibody

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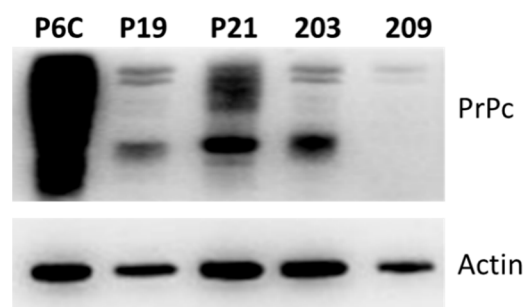


Figure S1. Western blotting of P6C, P6C-KO-P19, P6C-KO-P21 (which is not used in the article), P6C-KO-203, P6C-KO-209 by Clone 6.

A

Clone 6: EVQLQQSGPELVKPGASVKMSCKASGYTFTDYYMKWVKQSHGKSLEWIGDINPNNGDTFYNQ
 IGH: EVQLVQSGAEVKKPGATVKISCKVSGYTFTDYYMHWVQQAPGKGLEWMGLVDPEDGETIYAE
 HAb 6: EVQLVQSGAEVKKPGATVKMSCKASGYTFTDYYMKWVKQAPGKSLEWIGDINPNNGDTFYNQ
 HAb 6b: EVQLVQSGAEVKKPGATVKMSCKASGYTFTDYYMKWVKQAPGKGLEWIGDINPNNGDTFYNE
 HAb 6c: EVQLVQSGAEVKKPGATVKISCKASGYTFTDYYMKWVQQAPGKGLEWMGLVNPNGDTFYNE

Clone 6: KFKGKATLTVDKSSNTAYMQLNSLTSEDSAVYYCAKPG----RTYWGQGLTVTVS
 IGH: KFQGRVTITADTSTD TAYMELSSLRSED TAVYYCATGG IAVAAPYWGQGLTVTVS
 HAb 6: KFQGRATLTVDKSSNTAYMELSSLRSED TAVYYCAKPG----RTYWGQGLTVTVS
 HAb 6b: KFQGRATLTVDKSTNTAYMELSSLRSED TAVYYCAKPG----RTYWGQGLTVTVS
 HAb 6c: KFQGRVTITVDKSTNTAYMELSSLRSED TAVYYCATPG----RTYWGQGLTVTVS

B

Clone 6: DIVLTQSPSSLSVSAGEKVTMSCKSSQSLDSDGNQKNYLVWYQQKPGQPPKLLIYGASTRES
 IGL: DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKPGQPPKLLIYWASTRES
 HAb 6: DIVLTQSPDSLAVSLGERVTMSCKSSQSLDSDGNQKNYLVWYQQKPGQPPKLLIYGASTRES
 HAb 6b: DIVLTQSPDSLAVSLGERVTMSCKSSQSLDSDGNQKNYLVWYQQKPGQPPKLLIYGASTRES
 HAb 6c: DIVLTQSPDSLAVSLGERATISCKSSQSLDSDGNQKNYLVWYQQKPGQPPKLLIYGASTRES

Clone 6: GVPDRFTGSGSGTDFTLTISSVQPEDLAVYYCQNDHSYP-LTFGAGTKLELKR
 IGL: GVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQYYSTPSLTFAGTKVEIK-
 HAb 6: GVPDRFTGSGSGTDFTLTISSVQAEDVAVYYCQNDHSYP-LTFGAGTKLELKR
 HAb 6b: GVPDRFSGSGSGTDFTLTISSVQAEDVAVYYCQNDHSYP-LTFGAGTKLELKR
 HAb 6c: GVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQNDHSYP-LTFGAGTKLELKR

Figure S2. Humanization of mouse anti-PrPc antibody Clone 6. **(A)** Sequences of antibody heavy chain variable fragments. The IGH is the most similar human germline sequence with Clone 6. **(B)** Sequences of antibody light chain variable fragments (IGL). The IGL is the most similar human germline sequence with Clone 6. Red letters representing the amino acid residues of the human antibodies different from those of Clone 6. - stands for no corresponding amino acids.

Table S1. The sequence of primers.

primers	sequence
PrPc NHE1 F	GTACATGCTAGCGCCACCATGGCGAACCTTGCTGCTGG
PrPc XHO1 R	GTACATCTCGAGCCATCATCCCACTATCAGGAAGATGAGG
PrPc Fc F1	GTACATAAGCTTGCCACCATGGCGAACCTTGCC
PrPc Fc R2	GTACATCTCGAGTTATCACTTGCTGCTGGGCTCAGGG
PrPc Fc R1	GTCACAGGACTTAGGGGGCTCTCCTCTCTGGTAATAGGCCTG
PrPc Fc F2	CAGGCCTATTACCAGAGAGAGAGAGCCCCCTAAGTCCTGTGAC
PrPc hu heavy A16D F	GAAGAAGCCAGGCGATACCGTGAAGATG
PrPc hu heavy A16D R	CATCTTCACGGTATCGCCTGGCTTCTTC
A97V F	GTGTACTATTGTGTTAAGCCAGGAAGGAC
A97V R	GTCCTTCCTGGCTTAACACAATAGTACAC
41insert4AA F	GGGTGAAGCAGGCTCCCGGCAAGGCTCCCGGCAAGTCCCTGGAGTGG
41insert4AA R	CCACTCCAGGGACTTGCCGGGAGCCTTGCCGGGAGCCTGCTTCACCC
Hind3-kozak-SP-F	AATATAAGCTTGCCACCATGACCCGGCTGACCGTGCTG
genome R	CTGCGTGTCTGCTGGCCACAGC
gRNA	CGAGACCGACGTTAAGATGA