

## Supplementary Information

Table S1 The R119H mutant was constructed using PCR by the following pair of primers.

Mutant	Primers
R119H	5'-CAGCCCCCAGGGTCATCC(A)CTGCATGACCAAC-3' 5'-(T)GGATGACCCTGGGGGCTGGCCGAAACGCTGAC-3'

(in brackets, CGC → CAC results in Arg → His).

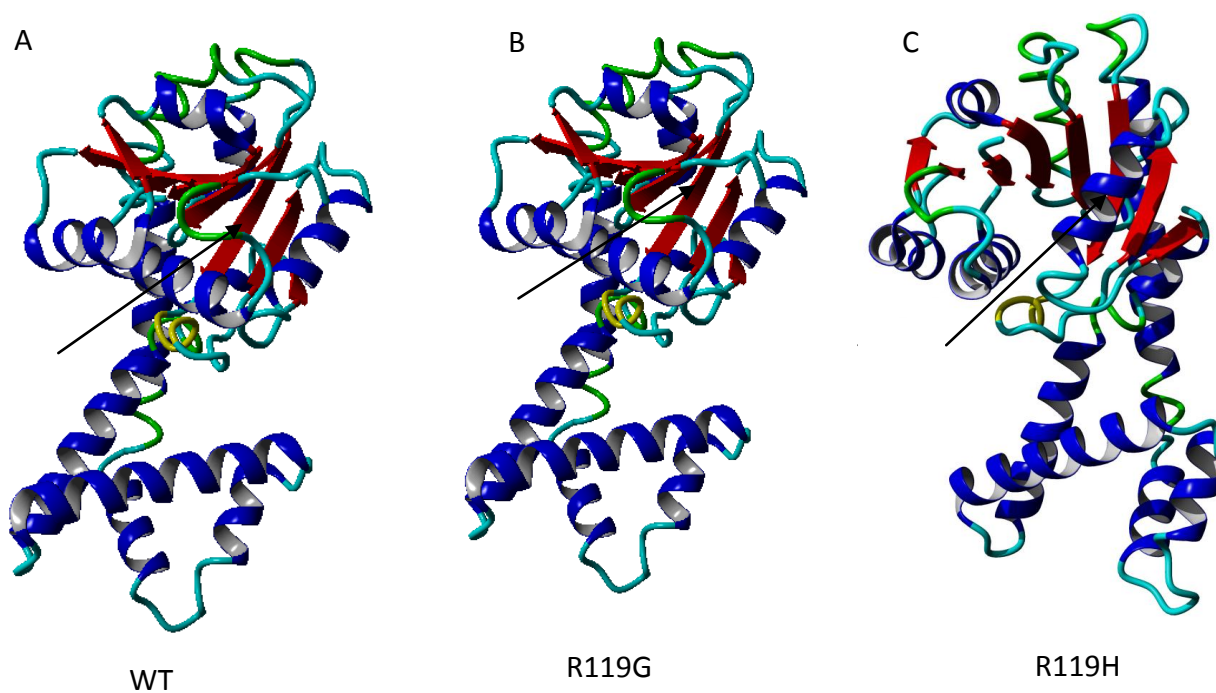


Fig.S1 3D structures of WT and mutants P5CR. (A) WT; (B) R119G; (C) R119H

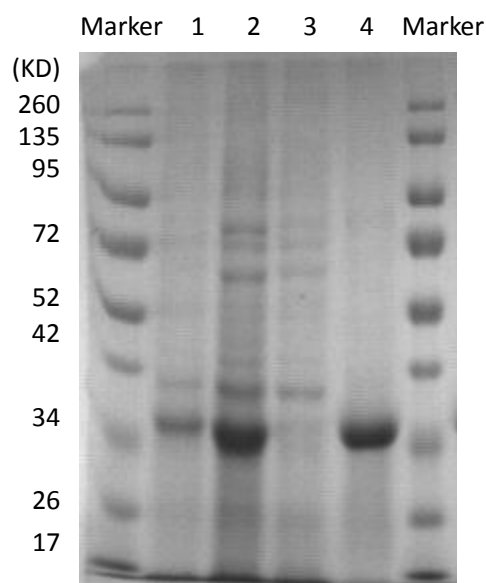


Fig.S2 Expression analysis of R119G mutant by 12% SDS-PAGE; Marker, molecular mass mark.1,before induction.2, after induction. 3, supernatant. 4, precipitate.

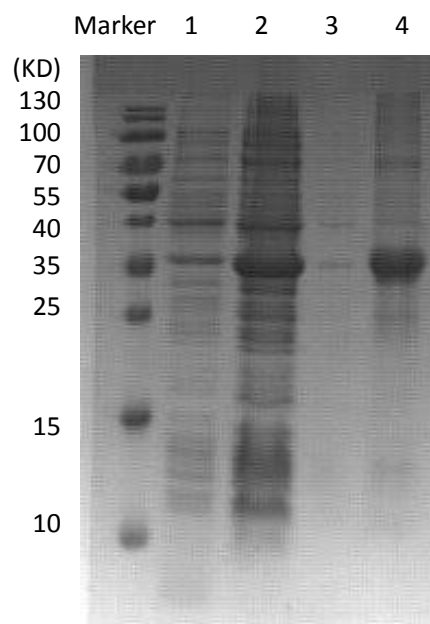


Fig.S3 Expression analysis of R119H mutant by 12% SDS-PAGE; Marker, molecular mass mark. 1, before induction.2, after induction. 3, supernatant. 4, precipitate.

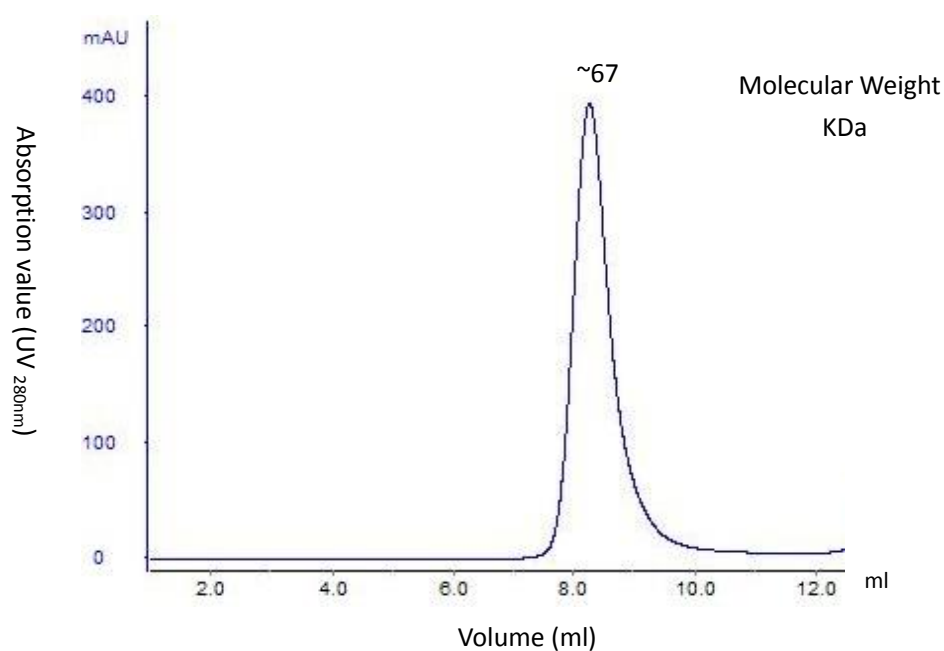


Fig. S4. Human R119H mutant shows a peak (~67KDa) by Superdex-75 column.