

Supplementary Material

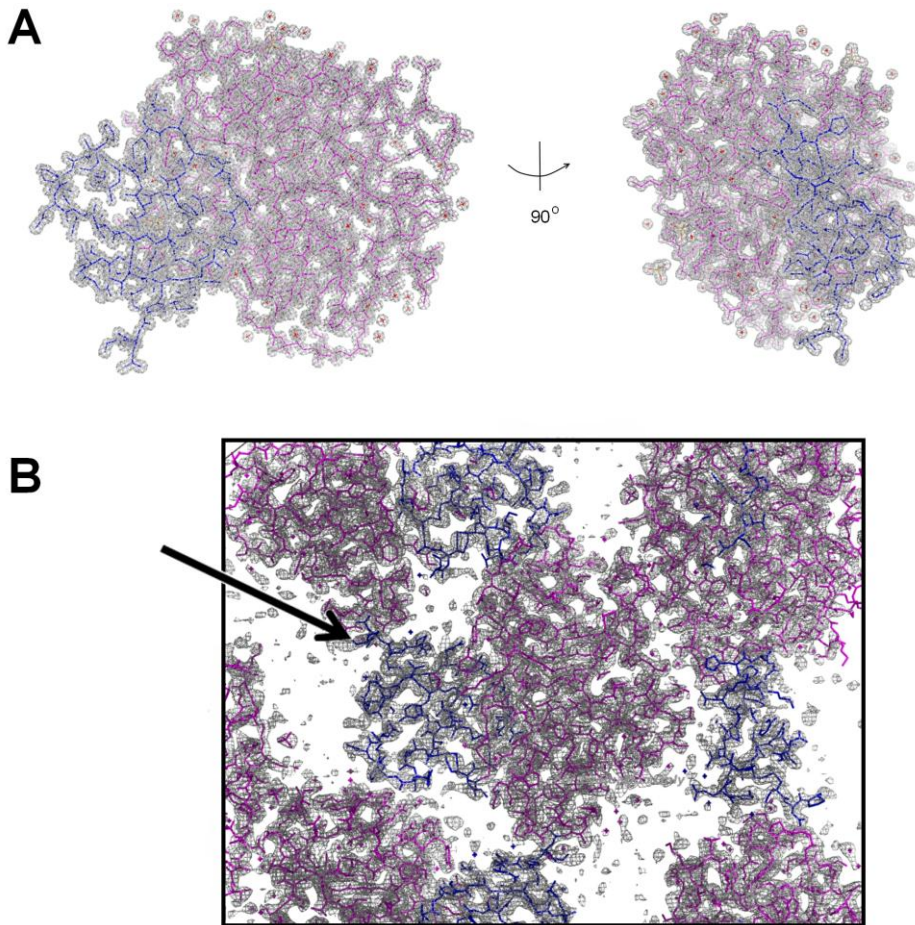


Figure S1. A- Electron density of infestin 1 domain complexed to trypsin. B. Symmetric molecules indicating that there is no space and electron density for infestin domain 2 in the crystal. Arrow indicates the C-terminus of domain 1.

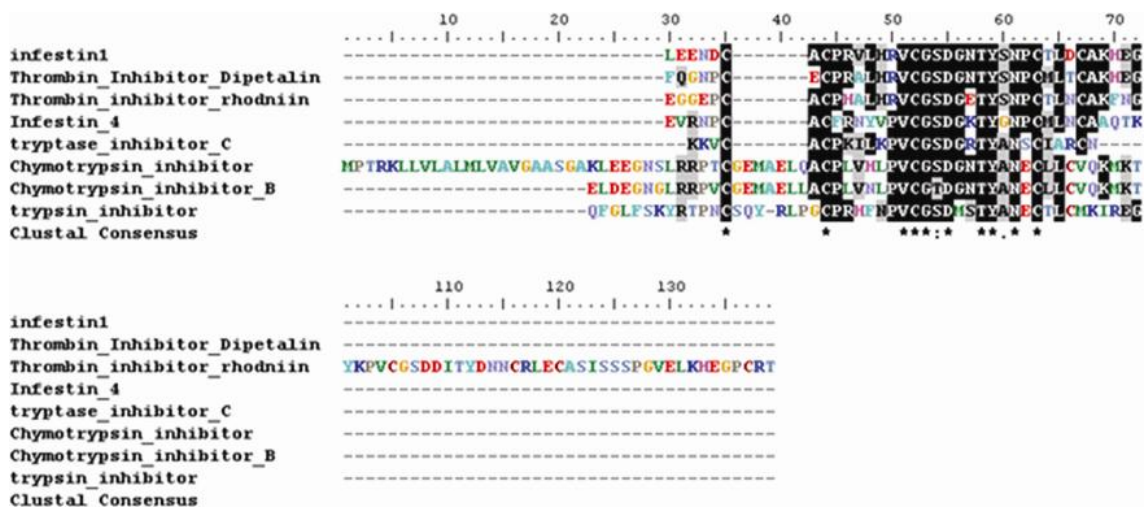


Figure S2. Alignment of amino acid sequences of different serine proteases inhibitors.

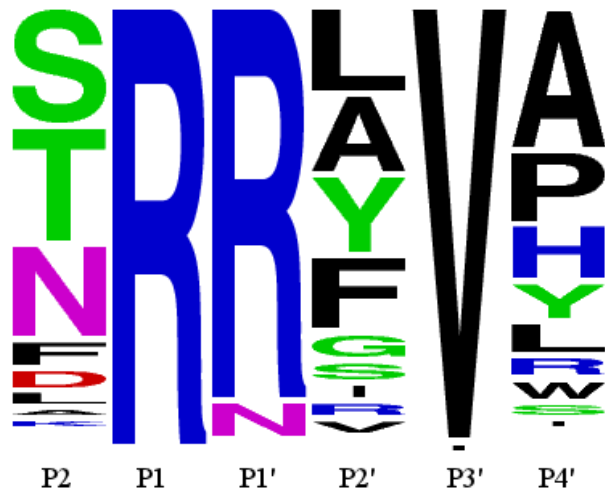


Figure S3. Weblogo representation of amino acid recurrence at the six mutated position of 80 random sequenced clones for factor XIIa. Weblogo was generated using WebLogo 3: Public Beta. In the representation, the corresponding frequency plot is reported. P3' position was not mutated (Val).

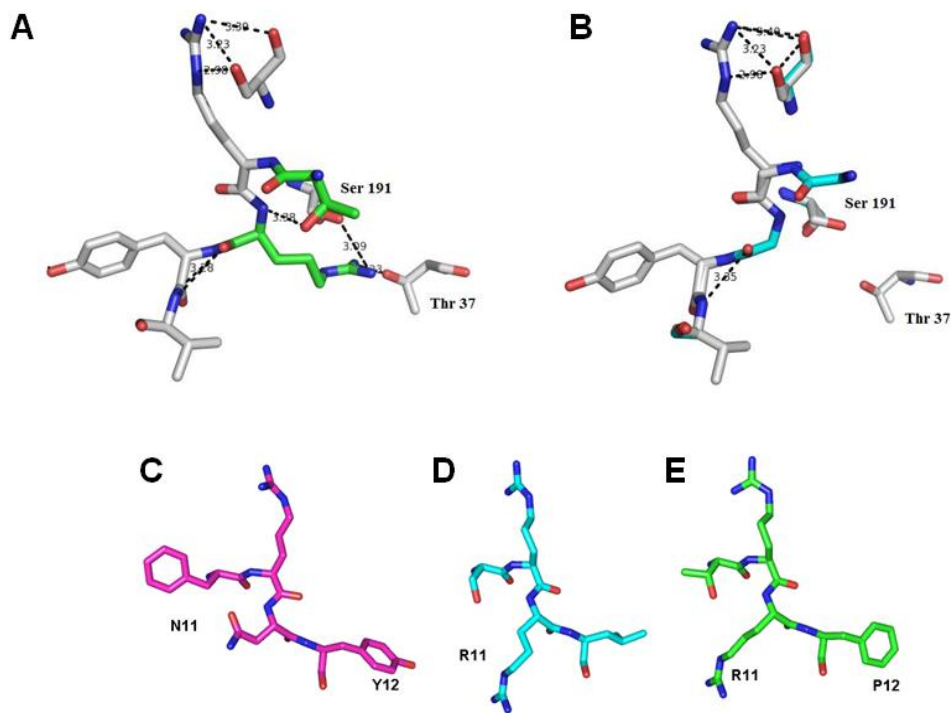


Figure S4. Model of mutant15 (A) and wild (B) infestin 4 complexed with factor XIIa. The mutations F6T and N8R are represented in green and blue in mutant and wild

infestin 4 structures, respectively. Residues of reactive site are illustrated in details for wild (C), mutant 3 (D) and mutant15 (E) infestin 4.