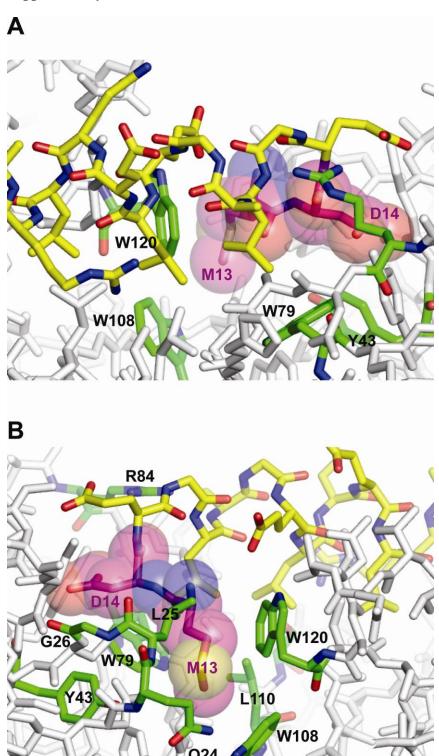
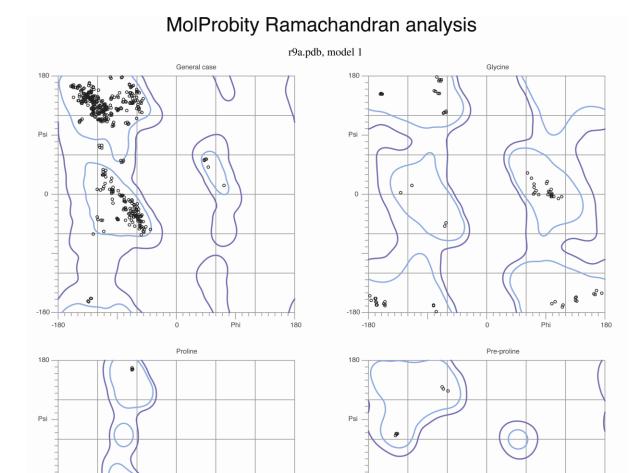
Supplementary Material



Supplementary Figure 1. Model of the N1 mutant showing how the replacement of the "HVV" motif with "MD" can potentially form stabilizing interactions with the biotin-binding pocket of SAV. (**A**) "Front" and (**B**) "back" views are drawn from the same viewpoints used to create Figs. 3(*a*) and 3(*b*).



97.9%~(507/518) of all residues were in favored (98%) regions. 100.0%~(518/518) of all residues were in allowed (>99.8%) regions.

There were no outliers.

http://kinemage.biochem.duke.edu

Lovell, Davis, et al. Proteins 50:437 (2003)

Supplementary Figure 2. Ramachandran plots showing the distribution of main-chain torsion angles as calculated by *MolProbity*.