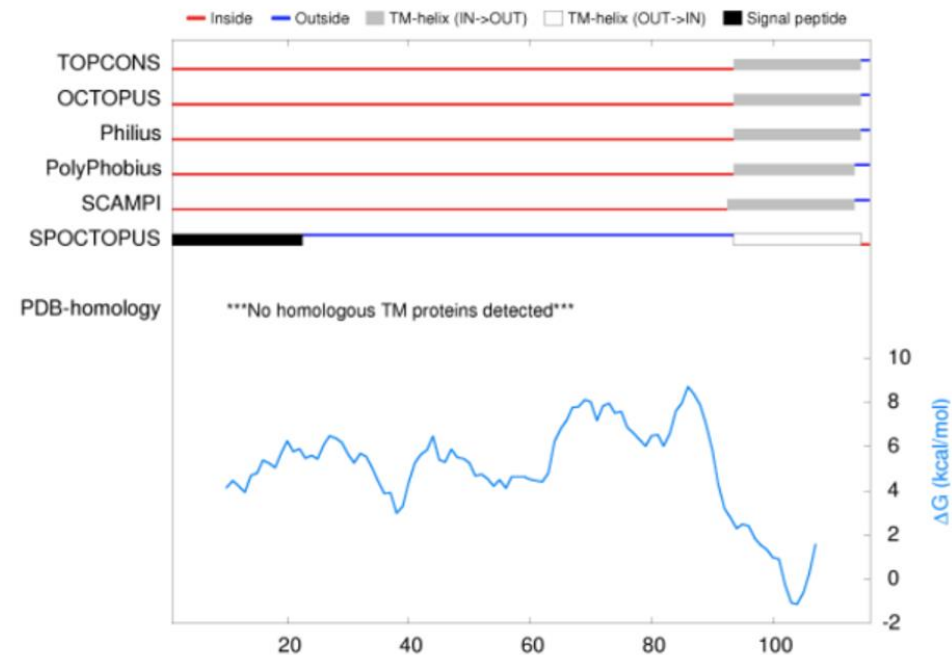


**Supplementary Figure S1.** *Nicotiana benthamiana* leaves, infiltrated with Potato virus X (PVX) and the two PVX-based constructs, were stained with DAB, NBT and trypan blue at five days post infiltration. Leaves infiltrated with PVX- $\beta$ V1 showed the highest accumulation of ROS, free radicals, and increased cell death.

Predicted topologies and predicted  $\Delta G$  values:



Predicted signal peptide and TM-helix positions (position starting from 1):

TOPCONS	<b>TM1: 94-114</b>	
OCTOPUS	<b>TM1: 94-114</b>	
Philius	<b>TM1: 94-114</b>	
PolyPhobius	<b>TM1: 94-113</b>	
SCAMPI	<b>TM1: 93-113</b>	
SPOCTOPUS	<b>SP: 1-23,</b>	<b>TM1: 94-114</b>
PDB-homology	***No homologous TM proteins detected***	

**Supplementary Figure S2.** Prediction of the topology of  $\beta V1$  protein. Transmembrane topology was derived using TOPCONS web server, and the consensus prediction of transmembrane domain by individual sub-methods are represented, and predicted G values are indicated in the graph.