## **Supplementary Table and Figure**

Table S1. Structural statistics for the rSsp1a ensemble	
Experimental restraints	
Interproton distance restraints	395
Intraresidue	106
Sequential	126
Medium range $(i-j < 5)$	57
Long range (i-j ≥5)	106
Dihedral-angle restraints	32
Hydrogen bonds	16
R.m.s. deviations from mean coordinate structure (Å)	
Backbone atoms (residue 1-17)	$0.76 \pm 0.27$
All heavy atoms (residue 1-17)	$1.38 \pm 0.22$
Ramachandran Statistics	
% in most favoured region	79%
% in additionally allowed region	21%

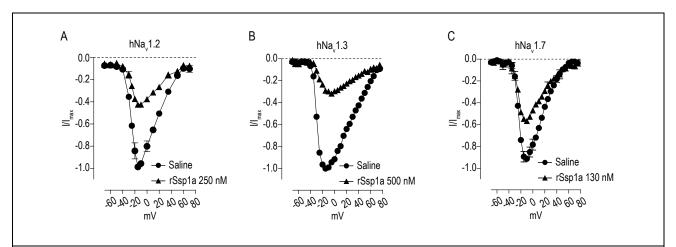


Figure S1. Effect of rSsp1a on current-voltage relationship of hNa $_{V}$ 1.2, hNa $_{V}$ 1.4 and hNa $_{V}$ 1.7. The  $\sim$ IC50 rSsp1a reduced the peak current without significantly affecting the activation threshold, activation voltage and reversal potential. Each data point in the curve is mean  $\pm$  SEM with n = 3–4.