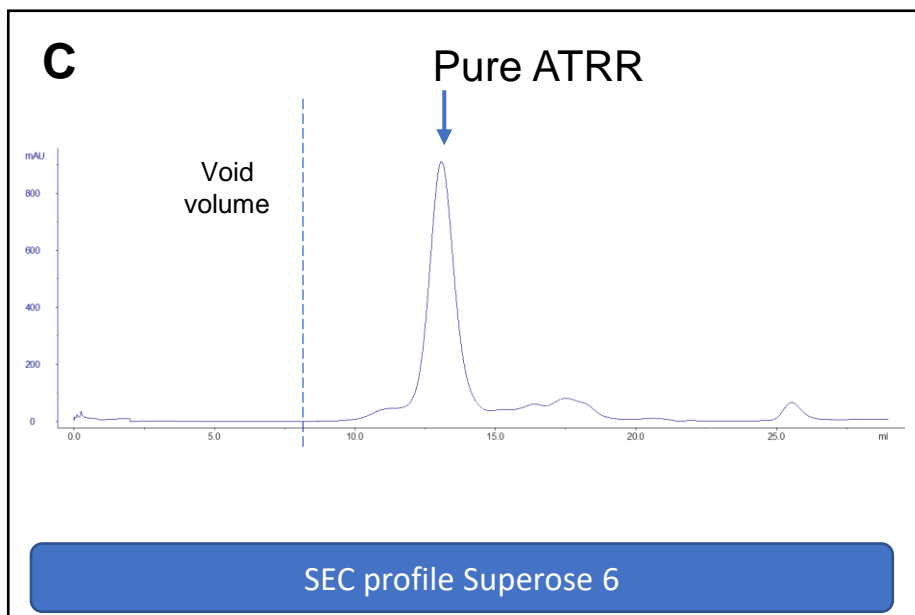


A. Purification of ATRR, domains and chemistry
Final stock of ATRR (130 kDa) on 10% SDS-PAGE
ATRR domain architecture and the ATP and NADPH dependent tandem reduction of glycine-betaine to produce choline.

B. Superdex 200- SEC
Superdex 200 SEC profile, shows homogenous symmetric profile for purified species, obtained after purification



D

Grid #	Conc (mg/ml)	Substrates	Potential Outcome
1	0.5	None	Open State - Baseline conformational space
2	0.5	Glycine-betaine	Partial adenylation State
3	0.2	AMP.PNP	Partial adenylation State
4	0.2	Gly-Bet, AMP.PNP	Complete adenylation State
5	0.2	choline	Partial reduction State
6	0.2	NADPH	Partial reduction State
7	0.2	NADPH, choline	Complete reduction State
8	0.2	All substrates	Combined states, if any

Grids and expected outcomes.

C. High MW range SEC
Superose 6 column run shows a main peak to be separated from oligomeric / aggregated fractions right before cryogrids preparation.

D. Grids
Grid setup and expected outcomes for exploring conformational states. Will be done in duplicates for total 8 (16) grids.