

**Supplementary Table 1. Summary of kinetic data**

Proteins	K <sub>M</sub> (mM AMP)	V <sub>max</sub> (nmolAMP/min*mg)
PARN WT	0.01	8368.5
F31A	0.05	159.7
I34A	0.03	416.0
F115A	0.02	777.7
F127A	0.01	5112.7
K326A	0.08	560.64
PARN (175-245)	0.16	16498.1
PARNn	0.50	272.9

Tabulated K<sub>M</sub> and V<sub>max</sub> values were measured at least twice.