

Distance System	10 Å Mean dG* (kcal/mol)	Mean dG0 (kcal/mol)
WT Human Sec	16.37 ±0.95 kcal/mol	-60.85 ±1.84 kcal/mol
WT Mouse Cys	20.72 ±1.07 kcal/mol	-55.43 ±1.77 kcal/mol
Mouse Sec	15.75 ±0.71 kcal/mol	-64.42 ±1.86 kcal/mol
Mouse Cys - S47A	17.38 ±0.59 kcal/mol	-56.04 ±2.59 kcal/mol
Human Sec A47S	18.95 ±1.22 kcal/mol	-58.86 ±1.90 kcal/mol
Mouse Cys T52A	20.08 ±1.35 kcal/mol	-48.75 ±2.83 kcal/mol
Human Sec A52T	19.49 ±0.61 kcal/mol	-56.84 ±1.80 kcal/mol
Mouse Cys F48Y	20.25 ±0.47 kcal/mol	-52.71 ±1.74 kcal/mol
Human Sec Y48F	23.69 ±1.61 kcal/mol	-51.15 ±1.82 kcal/mol
Human Sec Q54T	19.18 ±1.04 kcal/mol	-58.15 ±1.82 kcal/mol
Human Sec C99R	17.52 ±0.69 kcal/mol	-50.28 ±2.55 kcal/mol
Human Cys	19.34 ±1.05 kcal/mol	-49.99 ±2.73 kcal/mol

Table 1: Free Energy Changes