Supporting Information

Chemistry Letters

Quantitative Correlation between the Protein Expression Level in *Escherichia Coli* and Thermodynamic Stability of Protein In Vitro

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Table S1

Table S1 Parameters of the p53TDs *in vivo* and *in vitro* at 25°C.

Entry No.	Mutant	Relative Expression Level (%WT) at 25°C	$\Delta G_u^{25°C}$ (kJ mol^{-1})
1	WT	100 ± 0	155.1
2	G356A	93.6 ± 28.5	149.3
3	Y327H	70.8 ± 10.2	134.3
4	I332V	52.3 ± 17.0	147.0
5	A353T	73.6 ± 3.7	132.3
6	E346A	69.3 ± 21.2	141.3
7	Q354R	63.8 ± 1.8	128.5
8	R342Q	61.0 ± 8.4	134.7
9	Q331H	52.5 ± 2.4	146.5
10	Y327S	60.1 ± 13.0	117.3
11	E326G	61.1 ± 13.9	136.9
12	A347G	42.8 ± 11.2	115.7
13	R342L	47.8 ± 11.0	135.9
14	G334W	59.7 ± 30.5	118.1
15	D352H	67.8 ± 4.4	132.6
16	G334V	85.9 ± 16.4	121.8
17	E349D	45.5 ± 9.9	108.7
18	E343G	34.8 ± 5.7	125.5
19	G356W	27.4 ± 3.3	144.0
20	F328L	63.2 ± 6.3	113.1
21	L348F	37.8 ± 23.8	126.5
22	Q331P	21.8 ± 14.4	132.8
23	R335G	33.1 ± 11.6	110.3
24	A347T**	16.1 ± 8.7	42.3
25	R335H	10.6 ± 5.7	124.6
26	F328V	18.1 ± 6.5	107.7
27	R337H	11.9 ± 5.6	102.4
28	F338I	8.8 ± 4.2	100.5
29	R337L	5.1 ± 4.7	99.3
30	L330H	5.1 ± 2.6	90.5
31	L344R**	5.7 ± 7.5	40.8
32	R342P	0.1 ± 2.3	N.D.
33	R337C	0.1 ± 4.5	82.7
34	R337P	1.8 ± 0.9	N.D.
35	L330R	3.8 ± 3.5	N.D.
36	L344P	0.7 ± 3.6	N.D.
37	F341C**	2.1 ± 4.6	27.4

The ΔG_u values of p53TDs at 25°C were calculated using previous experimental data.[16]
** Double asterisk indicates dimer mutant that forms only dimer. N.D. indicates ΔG_u value not determine

Figure S1

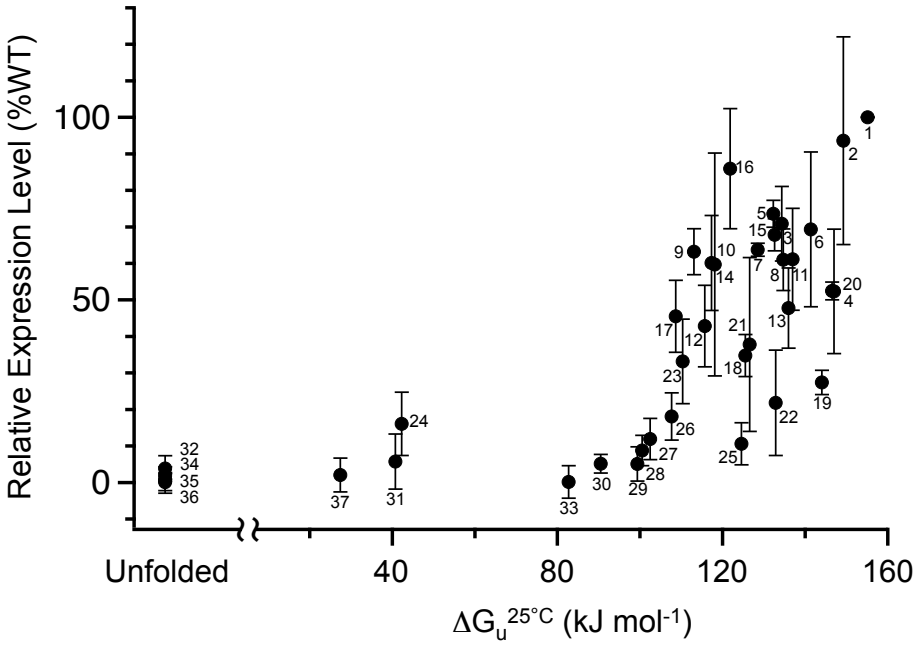

Figure S1

Correlation between thermodynamic stability and expression level of p53TD at 25°C. The relative expression level to WT is plotted as a function of ΔG_u value at 25°C which is calculated by using data in previous experiment.[16] Each point is shown by Entry No. in Table 1. "Unfolded" indicates a monomer mutant. The standard errors (n=3) are indicated.