A

ASAP2f L143G S144T F148X H151X R415Q –ΔF/F (%)

aa151	A	C	D	E	F	G	H	I	K	L	M	N	P	Q	R	S	T	V	W	Y
A	18.2 ± 3.9	14.6 ± 1.6	18.6 ± 3.0	19.6 ± 3.4	18.2 ± 2.6	16.1 ± 3.2	19.0 ± 2.3	15.1 ± 0.8	19.2 ± 6.4	16.4 ± 1.6	17.7 ± 2.2	17.0 ± 1.1	15.4 ± 4.3	17.1 ± 1.6	18.1 ± 1.8	16.2 ± 1.2	16.6 ± 1.1	18.1 ± 3.8	18.6 ± 5.5	18.1 ± 3.4
C	15.8 ± 4.1	12.6 ± n/a	12.8 ± n/a	16.2 ± 2.6	13.8 ± n/a	14.4 ± 1.5	16.4 ± n/a	18.9 ± n/a	16.1 ± n/a	15.1 ± n/a	15.4 ± n/a	14.4 ± n/a	13.8 ± 2.5	18.5 ± n/a	n/a	13.5 ± n/a	12.7 ± n/a	16.8 ± 4.3	12.4 ± n/a	15.4 ± n/a
D	13.0 ± 1.3	15.1 ± 3.5	17.4 ± 6.8	20.5 ± 3.5	18.1 ± 4.2	16.6 ± 1.2	17.8 ± 3.3	21.1 ± 0.1	17.8 ± 2.0	17.6 ± 0.4	17.0 ± 1.9	18.5 ± 4.3	17.8 ± 4.6	20.4 ± 7.1	18.0 ± 3.3	16.2 ± 4.4	14.9 ± 8.7	18.3 ± 2.1	17.6 ± 2.3	14.8 ± 2.3
E	16.7 ± 1.1	20.2 ± 1.3	17.5 ± 3.1	20.0 ± 5.3	18.3 ± 3.4	17.0 ± 0.2	19.3 ± 2.2	18.8 ± 2.6	17.1 ± 0.7	20.0 ± 0.3	17.3 ± 4.7	19.2 ± 1.4	17.9 ± 1.3	18.9 ± 4.2	17.4 ± 5.1	14.9 ± 7.2	15.5 ± 5.2	20.2 ± 1.3	14.1 ± 3.7	19.4 ± 2.5
F	n/a	12.6 ± n/a	21.3 ± 2.5	23.0 ± 1.8	17.3 ± 4.5	18.1 ± n/a	22.4 ± 2.8	13.0 ± n/a	22.1 ± 2.2	n/a	22.5 ± n/a	17.3 ± 4.4	15.0 ± n/a	21.5 ± 2.5	17.9 ± 0.8	19.9 ± 1.8	17.1 ± 5.5	17.4 ± n/a	21.7 ± 3.6	21.4 ± 0.7
G	16.6 ± 2.5	14.9 ± 4.6	20.0 ± 3.9	18.2 ± 2.9	18.8 ± 3.6	13.3 ± 1.3	18.4 ± 2.8	21.2 ± 3.1	18.3 ± 2.4	17.7 ± 3.2	18.6 ± 2.1	18.4 ± 4.3	16.3 ± 3.0	13.6 ± 0.0	16.7 ± 2.9	18.4 ± 3.8	17.6 ± 1.5	18.2 ± 6.1	18.3 ± 3.6	17.2 ± 1.9
H	17.9 ± 3.4	15.7 ± 2.7	20.8 ± 4.0	17.6 ± 1.0	18.6 ± 3.3	17.0 ± 3.4	21.1 ± 2.9	21.5 ± 4.1	18.5 ± 2.1	20.2 ± 3.2	17.8 ± 1.3	15.1 ± 2.4	18.5 ± 0.9	16.8 ± 3.9	16.9 ± 1.4	18.4 ± 4.4	13.9 ± 4.9	20.3 ± 0.6	20.1 ± 4.3	18.9 ± 5.8
I	16.5 ± 3.2	18.0 ± 1.5	22.5 ± 5.5	18.5 ± 1.9	20.2 ± 1.7	16.2 ± 1.5	17.1 ± 9.2	19.5 ± 2.6	19.9 ± 2.0	19.2 ± 2.9	16.8 ± 0.4	17.5 ± 1.8	17.5 ± 1.7	17.2 ± 1.4	18.7 ± 6.2	16.7 ± 2.8	15.4 ± 4.8	17.4 ± 1.3	18.6 ± 2.3	19.6 ± 3.5
K	17.3 ± 4.7	19.3 ± 2.0	18.4 ± 3.9	22.5 ± 2.7	16.7 ± 4.6	16.6 ± 1.6	19.4 ± 1.1	19.1 ± 1.9	17.4 ± 4.4	21.8 ± 4.7	20.6 ± 1.2	20.0 ± 3.3	16.5 ± 2.1	16.7 ± 3.8	17.8 ± 2.5	18.4 ± 2.2	16.0 ± 2.4	18.0 ± 2.6	20.7 ± 2.7	17.0 ± 2.2
L	18.5 ± 2.0	14.1 ± 1.5	21.5 ± 4.2	22.5 ± 1.3	16.0 ± 3.7	17.7 ± 2.9	15.4 ± 2.5	17.6 ± 4.4	18.1 ± 3.5	21.5 ± 3.5	18.1 ± 3.7	14.7 ± 2.0	17.4 ± 0.6	17.9 ± 3.7	16.9 ± 2.1	21.7 ± 2.9	12.6 ± 3.6	16.9 ± 2.0	18.6 ± 2.4	11.5 ± 0.1
M	16.6 ± 2.6	13.3 ± 3.5	17.2 ± 2.5	18.8 ± 5.7	17.5 ± 1.8	15.9 ± 3.8	18.8 ± 0.2	21.2 ± 3.1	22.0 ± 1.2	22.9 ± 0.8	19.5 ± 2.2	18.1 ± 2.4	14.4 ± 0.9	19.3 ± 3.2	15.9 ± 3.0	17.2 ± 1.8	13.9 ± 1.4	17.6 ± 3.2	20.5 ± 5.6	18.4 ± 5.4
N	18.2 ± n/a	16.7 ± n/a	21.0 ± 1.1	18.2 ± 2.0	17.0 ± 5.1	18.9 ± 5.4	22.9 ± n/a	21.9 ± n/a	17.3 ± 4.5	18.9 ± 5.9	19.5 ± 3.6	18.0 ± 3.4	n/a	16.8 ± 3.2	17.7 ± 0.8	16.8 ± 3.5	16.6 ± 5.5	25.6 ± n/a	19.0 ± 2.2	20.0 ± n/a
P	16.2 ± 3.8	18.3 ± 0.3	19.2 ± 3.9	19.6 ± 2.9	16.4 ± 2.3	9.2 ± 7.3	17.9 ± 2.9	18.0 ± 4.4	15.9 ± 3.2	17.9 ± 1.8	18.4 ± 2.3	17.5 ± 2.8	16.4 ± 3.6	17.2 ± 0.2	18.3 ± 3.0	15.7 ± 5.3	17.4 ± 2.8	16.7 ± 1.6	16.9 ± 3.5	18.6 ± 4.4
Q	14.9 ± 1.3	15.6 ± 2.2	19.0 ± n/a	17.5 ± 4.3	16.4 ± 1.1	15.8 ± 0.9	16.8 ± n/a	13.9 ± 2.3	17.7 ± 2.3	15.5 ± 1.9	16.1 ± 3.4	17.4 ± n/a	16.0 ± 1.1	17.8 ± 1.5	19.2 ± n/a	17.0 ± 1.3	14.9 ± n/a	16.9 ± 0.7	16.7 ± 2.7	14.8 ± n/a
R	18.8 ± 5.8	18.3 ± 2.5	21.2 ± 5.2	21.7 ± 2.5	16.2 ± 2.4	15.9 ± 2.0	17.9 ± 2.0	13.9 ± 1.7	16.4 ± 4.5	19.3 ± 1.1	16.7 ± 2.6	19.3 ± 3.7	14.9 ± 3.2	15.6 ± 0.9	17.8 ± 2.0	16.4 ± 4.5	18.7 ± 1.0	18.4 ± 3.2	19.1 ± 1.0	16.5 ± 1.5
S	14.8 ± 3.9	15.3 ± 4.0	20.1 ± 3.5	17.0 ± 6.6	16.9 ± 4.5	17.4 ± 5.1	17.0 ± 4.7	18.4 ± 2.9	12.0 ± 1.2	15.6 ± 4.2	15.5 ± 2.5	15.6 ± 5.4	14.8 ± 3.1	21.0 ± 5.4	14.4 ± 2.2	14.1 ± 5.7	16.1 ± 5.2	19.1 ± 1.2	19.2 ± 1.0	15.5 ± 4.7
T	17.3 ± 2.8	19.0 ± 0.3	25.3 ± 1.8	24.5 ± 1.8	21.6 ± 1.2	19.5 ± n/a	23.6 ± 1.3	21.5 ± 3.9	20.0 ± 3.7	20.7 ± 2.9	19.6 ± 2.0	21.1 ± 1.3	19.1 ± 6.2	22.9 ± 2.2	20.0 ± 2.5	21.1 ± 3.5	17.2 ± n/a	18.6 ± 0.2	22.9 ± 2.0	22.3 ± 0.9
V	16.0 ± 3.3	13.7 ± 3.6	20.0 ± 1.3	20.4 ± 4.4	14.0 ± 2.6	20.1 ± 0.8	17.3 ± 4.6	18.7 ± 0.9	18.2 ± 2.2	18.8 ± 2.3	17.5 ± 3.4	16.1 ± 0.7	15.5 ± 0.8	15.9 ± 4.7	17.1 ± 0.8	17.6 ± 1.9	17.3 ± 1.0	18.0 ± 4.2	15.9 ± 4.5	16.0 ± 2.4
W	16.3 ± 1.3	16.8 ± 1.2	18.6 ± 1.5	18.4 ± 1.5	15.0 ± 3.1	16.7 ± 2.5	13.3 ± 2.6	19.7 ± 1.0	19.1 ± 2.5	15.9 ± 1.4	17.6 ± 1.2	15.4 ± 2.5	15.4 ± 0.5	13.9 ± n/a	16.9 ± 0.8	18.5 ± 2.0	17.0 ± 2.0	19.2 ± 4.5	17.9 ± 1.2	16.8 ± 3.1
Y	15.3 ± 3.4	14.6 ± 2.6	20.2 ± 1.2	20.2 ± 0.1	14.8 ± 1.5	17.3 ± 2.0	16.6 ± 3.7	18.8 ± 4.3	18.7 ± 2.8	18.5 ± 1.1	14.0 ± 1.1	18.0 ± 3.9	16.1 ± 1.3	16.4 ± 1.4	16.7 ± 4.9	19.2 ± 3.6	15.6 ± 1.1	18.7 ± 1.6	15.5 ± 0.1	15.0 ± 3.4

aa148

B

ASAP2f L143G S144T F148X H151X R415Q – $t_{1/2}$ (ms)

aa151	A	C	D	E	F	G	H	I	K	L	M	N	P	Q	R	S	T	V	W	Y
A	24.3 ± 1.5	19.3 ± 4.5	16.3 ± 2.5	18.3 ± 4.5	16.7 ± 2.9	18.0 ± 5.2	19.3 ± 3.1	20.5 ± 0.7	18.5 ± 0.7	17.7 ± 2.5	17.0 ± 1.7	22.5 ± 0.7	20.0 ± 5.2	16.7 ± 1.5	20.0 ± 4.6	19.7 ± 6.1	18.3 ± 3.2	18.7 ± 3.2	20.0 ± 4.2	20.0 ± 6.1
C	24.7 ± 2.1	19.0 ± n/a	22.0 ± n/a	18.7 ± 4.6	15.0 ± n/a	20.0 ± 2.8	15.0 ± n/a	14.0 ± n/a	19.0 ± n/a	12.0 ± n/a	22.0 ± n/a	15.0 ± n/a	17.3 ± 3.5	17.0 ± n/a	n/a	16.0 ± n/a	19.0 ± n/a	17.7 ± 3.1	20.0 ± n/a	24.0 ± n/a
D	20.0 ± 1.4	19.0 ± 4.2	19.7 ± 4.9	22.0 ± 0.0	19.0 ± 2.6	20.0 ± 2.6	22.7 ± 8.0	18.7 ± 3.5	18.0 ± 1.4	17.5 ± 3.5	19.0 ± 1.4	23.3 ± 4.0	17.0 ± 2.6	17.0 ± 1.4	20.0 ± 7.9	18.0 ± 2.8	22.5 ± 2.1	18.0 ± 1.7	25.0 ± 5.0	16.3 ± 0.6
E	17.5 ± 0.7	20.0 ± 3.5	17.3 ± 4.0	15.0 ± 0.0	18.7 ± 4.7	14.0 ± 0.0	20.3 ± 2.5	22.5 ± 2.1	19.0 ± 1.4	17.0 ± 2.6	15.5 ± 0.7	20.5 ± 2.1	18.7 ± 3.1	20.0 ± 0.0	23.0 ± 0.0	14.7 ± 11.8	18.3 ± 2.9	21.3 ± 2.9	22.3 ± 5.9	21.0 ± 5.0
F	n/a	30.0 ± n/a	16.3 ± 4.0	16.7 ± 4.6	20.0 ± 3.6	15.0 ± n/a	24.0 ± 3.6	21.0 ± n/a	22.3 ± 1.5	n/a	20.0 ± n/a	23.5 ± 0.7	15.0 ± n/a	18.5 ± 2.1	22.0 ± 1.0	21.0 ± 4.2	17.7 ± 3.1	18.0 ± n/a	19.0 ± 5.2	19.7 ± 2.1
G	22.0 ± 3.0	17.7 ± 5.0	22.3 ± 6.5	20.3 ± 4.6	21.3 ± 3.2	16.7 ± 0.6	20.3 ± 2.5	19.0 ± 3.5	17.3 ± 4.9	19.0 ± 2.6	20.0 ± 1.0	23.3 ± 4.7	14.7 ± 3.2	20.0 ± 1.4	21.7 ± 5.0	20.0 ± 2.0	20.7 ± 3.8	18.3 ± 4.0	19.3 ± 4.9	16.0 ± 2.8
H	20.0 ± 2.8	18.7 ± 1.5	18.0 ± 5.6	19.3 ± 0.6	21.0 ± 3.0	17.0 ± 2.6	20.0 ± 2.8	19.0 ± 3.0	21.0 ± 1.0	19.7 ± 2.5	20.0 ± 3.0	26.3 ± 1.2	18.3 ± 2.5	17.5 ± 2.1	23.3 ± 6.5	17.7 ± 3.1	22.7 ± 2.3	15.0 ± 12.2	17.0 ± 1.4	21.0 ± 5.3
I	23.3 ± 4.0	21.5 ± 0.7	22.3 ± 3.8	21.7 ± 5.5	19.3 ± 1.5	19.3 ± 4.5	20.5 ± 4.9	18.7 ± 2.9	19.0 ± 3.0	19.0 ± 3.5	17.7 ± 3.1	20.0 ± 1.4	15.0 ± 2.8	18.7 ± 2.1	20.7 ± 5.0	17.7 ± 2.5	20.3 ± 5.9	18.5 ± 4.9	22.7 ± 4.5	21.3 ± 4.5
K	18.0 ± 1.0	18.7 ± 2.1	22.7 ± 0.6	20.0 ± 5.7	20.0 ± 3.0	19.7 ± 1.5	17.3 ± 3.2	21.7 ± 6.7	19.7 ± 1.2	19.7 ± 4.7	19.7 ± 2.5	21.0 ± 1.7	22.0 ± 0.0	22.5 ± 0.7	21.0 ± 2.6	19.3 ± 3.1	21.0 ± 4.2	18.0 ± 5.3	20.0 ± 4.0	19.0 ± 1.4
L	21.3 ± 4.7	26.3 ± 7.6	19.0 ± 1.7	15.7 ± 2.1	17.3 ± 3.1	23.0 ± 2.0	22.3 ± 3.2	19.7 ± 3.1	20.7 ± 4.7	17.3 ± 1.5	20.0 ± 3.6	24.3 ± 8.4	16.0 ± 3.0	18.0 ± 4.6	18.7 ± 2.3	23.0 ± 1.0	15.0 ± 1.7	20.7 ± 5.1	20.0 ± 5.2	20.5 ± 7.8
M	22.0 ± 1.7	16.7 ± 1.5	16.0 ± 2.6	17.5 ± 0.7	20.7 ± 5.7	16.7 ± 3.5	18.0 ± 2.8	16.5 ± 0.7	18.7 ± 2.1	19.7 ± 6.0	20.7 ± 5.7	19.0 ± 6.1	19.3 ± 2.9	20.3 ± 1.5	20.7 ± 3.5	19.3 ± 3.2	19.7 ± 2.9	18.7 ± 3.5	15.0 ± 0.0	20.0 ± 3.6
N	26.0 ± n/a	20.0 ± n/a	21.0 ± 3.6	21.7 ± 1.5	19.8 ± 4.5	18.8 ± 4.8	19.0 ± n/a	21.0 ± n/a	16.3 ± 2.1	20.8 ± 1.7	19.8 ± 8.5	20.7 ± 2.1	n/a	18.3 ± 1.2	20.0 ± 4.4	22.0 ± 3.0	18.5 ± 3.5	23.0 ± n/a	19.0 ± 4.5	15.0 ± n/a
P	25.0 ± 3.5	19.7 ± 3.5	21.7 ± 5.7	22.0 ± 0.0	21.3 ± 5.0	17.0 ± 1.4	17.0 ± 0.0	20.3 ± 1.2	15.5 ± 0.7	16.7 ± 4.0	18.7 ± 3.5	17.0 ± 1.4	19.7 ± 2.5	22.3 ± 3.2	24.3 ± 6.7	21.7 ± 5.7	18.3 ± 1.5	18.7 ± 2.3	18.7 ± 1.5	21.3 ± 3.8
Q	27.3 ± 3.5	17.0 ± 6.0	16.0 ± n/a	20.5 ± 7.1	19.3 ± 3.1	22.3 ± 2.5	16.0 ± n/a	20.0 ± 1.7	20.0 ± 1.4	20.3 ± 5.0	22.3 ± 1.5	25.0 ± n/a	19.0 ± 5.3	16.8 ± 2.5	16.0 ± n/a	20.3 ± 4.6	18.0 ± n/a	20.7 ± 1.2	18.0 ± 1.8	24.0 ± n/a
R	19.0 ± 7.1	25.7 ± 0.6	17.0 ± 2.8	17.3 ± 3.5	21.0 ± 2.6	23.3 ± 4.0	23.3 ± 3.5	18.0 ± 2.6	21.5 ± 2.1	18.3 ± 4.2	18.3 ± 3.5	18.7 ± 3.8	23.3 ± 4.0	17.3 ± 0.6	18.7 ± 3.1	23.0 ± 2.8	23.0 ± 7.5	19.0 ± 2.6	18.7 ± 1.2	21.3 ± 2.5
S	20.0 ± 4.0	19.3 ± 1.5	18.0 ± 4.2	17.5 ± 0.7	24.0 ± 1.4	18.0 ± 2.6	19.0 ± 2.8	19.7 ± 2.5	21.5 ± 4.9	19.0 ± 3.0	17.0 ± 2.0	18.0 ± 1.4	18.3 ± 3.8	17.0 ± 1.4	19.0 ± 0.0	22.0 ± 3.0	18.5 ± 0.7	19.0 ± 1.4	15.5 ± 2.1	21.5 ± 3.5
T	19.0 ± 0.0	18.3 ± 0.6	18.7 ± 3.2	17.3 ± 2.5	15.7 ± 3.8	16.0 ± n/a	19.0 ± 1.7	19.7 ± 4.2	19.0 ± 1.7	15.0 ± 0.0	17.7 ± 1.2	20.3 ± 7.6	23.0 ± 5.3	20.7 ± 2.5	19.7 ± 1.2	18.0 ± 2.6	22 ± n/a	17.0 ± 2.8	19.0 ± 1.0	18.0 ± 3.6
V	24.0 ± 5.6	19.0 ± 5.6	18.7 ± 2.3	19.7 ± 2.9	20.3 ± 6.7	17.7 ± 2.3	16.3 ± 3.2	21.0 ± 3.6	20.3 ± 2.1	22.7 ± 5.7	18.0 ± 2.0	22.3 ± 4.0	18.3 ± 6.7	17.3 ± 2.1	20.5 ± 0.7	18.0 ± 2.0	20.3 ± 4.0	21.5 ± 0.7	20.0 ± 3.6	19.3 ± 1.5
W	19.7 ± 2.5	24.0 ± 2.6	18.7 ± 1.2	22.3 ± 2.1	22.0 ± 2.0	19.0 ± 2.8	26.0 ± 8.2	19.3 ± 2.5	23.3 ± 2.1	20.0 ± 4.0	22.5 ± 2.1	23.7 ± 1.5	21.0 ± 5.7	17.0 ± n/a	21.0 ± 8.7	19.0 ± 5.2	20.3 ± 4.0	20.0 ± 1.0	20.3 ± 1.5	24.0 ± 2.6
Y	28.0 ± 11.5	23.0 ± 6.1	17.7 ± 2.1	15.7 ± 2.1	21.0 ± 2.6	19.5 ± 0.7	16.0 ± 3.0	20.0 ± 3.6	17.0 ± 2.0	21.3 ± 6.7	19.0 ± 1.7	21.7 ± 6.7	18.7 ± 4.0	19.7 ± 5.5	17.7 ± 3.1	17.7 ± 3.8	18.3 ± 2.5	15.3 ± 2.1	20.3 ± 3.5	20.7 ± 3.5

aa148

C

ASAP2f L143G S144T F148X H151X R415Q initial intensity (% of parent)

aa151	A	C	D	E	F	G	**H**	I	K	L	M	N	P	Q	R	S	T	V	W	Y
A	90 ± 26	84 ± 9	90 ± 24	96 ± 22	91 ± 33	97 ± 19	80 ± 12	105 ± 54	102 ± 10	105 ± 49	107 ± 69	117 ± 32	146 ± 40	99 ± 55	97 ± 34	84 ± 48	90 ± 17	124 ± 53	110 ± 46	92 ± 18
C	137 ± 58	134 ± n/a	90 ± n/a	113 ± 41	101 ± n/a	126 ± 29	102 ± n/a	132 ± n/a	138 ± n/a	101 ± n/a	132 ± n/a	117 ± n/a	101 ± 42	107 ± n/a	n/a	93 ± n/a	111 ± n/a	78 ± 44	100 ± n/a	102 ± n/a
D	55 ± 9	89 ± 19	87 ± 42	77 ± 56	35 ± 25	56 ± 17	81 ± 34	114 ± 37	55 ± 5	107 ± 17	90 ± 23	99 ± 68	127 ± 33	101 ± 23	72 ± 41	61 ± 29	61 ± 27	104 ± 32	75 ± 16	49 ± 37
E	81 ± 4	77 ± 25	84 ± 19	84 ± 56	105 ± 16	86 ± 14	138 ± 14	82 ± 35	96 ± 23	73 ± 14	82 ± 23	71 ± 2	104 ± 21	134 ± 15	72 ± 55	78 ± 42	94 ± 45	86 ± 39	98 ± 47	100 ± 22
F	n/a	211 ± n/a	166 ± 38	120 ± 50	66 ± 26	226 ± n/a	100 ± 34	99 ± n/a	108 ± 7	n/a	198 ± n/a	143 ± 11	103 ± n/a	150 ± 27	105 ± 21	111 ± 30	75 ± 30	118 ± n/a	124 ± 7	94 ± 33
G	93 ± 66	104 ± 57	77 ± 37	102 ± 42	86 ± 15	91 ± 45	107 ± 46	112 ± 21	67 ± 33	84 ± 23	99 ± 42	84 ± 19	92 ± 43	38 ± 11	101 ± 29	96 ± 40	89 ± 42	104 ± 41	98 ± 35	98 ± 21
H	93 ± 20	124 ± 35	103 ± 47	108 ± 39	65 ± 30	71 ± 39	92 ± 49	109 ± 15	101 ± 11	56 ± 21	87 ± 51	110 ± 41	108 ± 40	95 ± 35	87 ± 57	103 ± 38	90 ± 31	106 ± 40	89 ± 47	92 ± 48
I	86 ± 38	156 ± 65	125 ± 24	115 ± 43	94 ± 48	110 ± 29	63 ± 29	103 ± 5	103 ± 20	91 ± 22	114 ± 27	75 ± 50	122 ± 11	90 ± 22	84 ± 23	99 ± 16	86 ± 44	71 ± 5	67 ± 14	61 ± 34
K	83 ± 36	82 ± 29	93 ± 38	119 ± 19	68 ± 13	78 ± 43	84 ± 39	102 ± 66	52 ± 34	88 ± 57	112 ± 19	78 ± 41	126 ± 3	114 ± 15	116 ± 15	80 ± 16	127 ± 50	87 ± 26	86 ± 60	131 ± 46
L	113 ± 18	90 ± 50	65 ± 15	88 ± 24	124 ± 23	138 ± 20	95 ± 25	85 ± 26	133 ± 22	84 ± 7	101 ± 22	84 ± 63	109 ± 40	96 ± 39	102 ± 73	98 ± 7	71 ± 37	66 ± 13	91 ± 63	99 ± 13
M	113 ± 28	128 ± 50	118 ± 10	160 ± 33	93 ± 14	87 ± 43	89 ± 47	112 ± 48	111 ± 0	98 ± 34	107 ± 57	116 ± 25	108 ± 25	102 ± 13	91 ± 20	107 ± 15	92 ± 19	89 ± 11	108 ± 32	82 ± 29
N	229 ± n/a	174 ± n/a	86 ± 27	90 ± 9	105 ± 38	129 ± 56	129 ± n/a	134 ± n/a	78 ± 48	93 ± 25	94 ± 44	97 ± 10	n/a	99 ± 37	60 ± 14	96 ± 58	148 ± 4	120 ± n/a	143 ± 33	195 ± n/a
P	121 ± 51	101 ± 19	74 ± 19	70 ± 15	98 ± 16	75 ± 84	105 ± 59	65 ± 33	114 ± 45	68 ± 27	76 ± 44	66 ± 2	130 ± 56	110 ± 44	64 ± 23	65 ± 13	84 ± 18	74 ± 53	79 ± 34	100 ± 16
Q	95 ± 32	89 ± 16	92 ± n/a	77 ± 40	76 ± 35	107 ± 17	76 ± n/a	108 ± 54	73 ± 44	103 ± 40	124 ± 46	145 ± n/a	167 ± 81	121 ± 27	102 ± n/a	99 ± 33	97 ± n/a	87 ± 16	84 ± 18	77 ± n/a
R	74 ± 45	124 ± 63	132 ± 25	89 ± 20	78 ± 22	96 ± 21	110 ± 36	115 ± 62	73 ± 45	91 ± 56	80 ± 14	101 ± 43	94 ± 18	102 ± 28	95 ± 45	76 ± 30	104 ± 51	102 ± 46	90 ± 32	115 ± 18
S	104 ± 23	91 ± 41	113 ± 56	67 ± 9	97 ± 25	104 ± 31	123 ± 68	83 ± 13	26 ± 6	77 ± 32	109 ± 40	40 ± 18	106 ± 35	73 ± 27	41 ± 3	68 ± 50	82 ± 41	86 ± 34	88 ± 48	83 ± 24
T	107 ± 37	125 ± 30	113 ± 66	115 ± 29	135 ± 58	57 ± n/a	117 ± 18	92 ± 45	113 ± 52	91 ± 5	126 ± 51	104 ± 21	101 ± 53	122 ± 34	103 ± 49	121 ± 17	55 ± n/a	72 ± 37	146 ± 26	126 ± 13
V	130 ± 39	132 ± 86	96 ± 23	117 ± 23	120 ± 22	73 ± 31	100 ± 56	112 ± 48	68 ± 19	108 ± 47	118 ± 42	108 ± 44	144 ± 37	113 ± 35	67 ± 18	87 ± 31	99 ± 35	101 ± 17	76 ± 18	114 ± 44
W	90 ± 38	142 ± 67	97 ± 20	75 ± 34	50 ± 24	106 ± 28	106 ± 23	138 ± 49	96 ± 25	99 ± 21	105 ± 6	120 ± 63	119 ± 57	50 ± n/a	106 ± 12	99 ± 32	86 ± 17	112 ± 65	108 ± 6	119 ± 32
Y	95 ± 52	104 ± 14	92 ± 33	99 ± 34	92 ± 37	82 ± 3	120 ± 37	104 ± 44	68 ± 19	117 ± 8	133 ± 59	78 ± 29	121 ± 11	79 ± 39	90 ± 49	95 ± 30	102 ± 73	117 ± 35	82 ± 19	115 ± 19

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