Supplemental Table 2, Hu et al.

Statistics for cysteine mutants

Plate #1	**Zinc**			**FFA**		
Clones	EC_{50}	nHill	Emax	EC_{50}	nHill	Emax
hTRP1-WT	3.6±0.3	1.7±0.2	100	1.7±0.5	1.1±0.3	100
C59S	2.9±0.3	1.6±0.2	89.7	1.7±0.3	1.3±0.3	95.2
C104S	3.4±0.2	1.3±0.1	87.4	1.9±0.3	1.3±0.3	95.1
C173S	3.4±0.5	1.2±0.2	91.1	2.4±0.3	0.9±0.1	107.2
C192S	3.5±0.7	1.3±0.3	88.9	2.5±0.4	1.1±0.2	127.5
C199S	4.3±0.7	1.5±0.3	88.2	2.2±0.3	1.1±0.1	104.8
C213S	4.4±0.3	1.5±0.1	88.8	3.3±0.6	1.1±0.2	112.4
C258S	5.2±0.4	1.2±0.1	82.9	2.5±0.5	1.0±0.2	91.5
C273S	3.2±0.3	1.4±0.2	95.8	2.6±0.6	1.0±0.2	105.1
C308S	6.3±0.4	1.1±0.1	88.2	2.8±0.7	1.1±0.3	109.5
C414S	ND	ND	ND	ND	ND	ND

Plate #2	**Zinc**			**FFA**		
Clones	EC_{50}	nHill	Emax	EC_{50}	nHill	Emax
hTRP1-WT	1.8±0.4	1.5±0.5	100	1.8±0.3	1.6±0.3	100
C421S	2.0±0.2	1.0±0.1	18	10.3±1.9	1.1±0.2	56.1
C462S	3.2±0.3	1.5±0.4	81.3	2.1±0.2	1.2±0.1	84.7
C540S	4.1±0.8	1.8±0.5	91.7	4.4±1.1	1.3±0.3	107.1
C608S	3.0±0.3	1.3±0.4	127.3	2.0±0.3	1.2±0.2	119.2
C633S	3.4±0.6	1.6±0.7	97.3	3.3±0.4	1.0±0.1	110.6
C651S	3.3±0.5	1.7±0.7	119.7	2.1±0.2	1.5±0.2	107.7
C703S	3.4±0.7	1.4±0.4	94.7	1.6±0.2	1.6±0.3	94.8

Plate #3	**Zinc**			**FFA**		
Clones	EC_{50}	nHill	Emax	EC_{50}	nHill	Emax
hTRP1-WT	3.1±0.7	1.3±0.4	100	3.6±0.9	1.8±0.5	100
C727S	5.3±0.5	1.6±0.2	36.7	7.6±2.9	1.1±0.3	53.7
C773S	4.2±1.5	1.5±0.7	19.9	8.4±2.7	1.3±0.5	56.5
C786S	3.2±0.2	1.6±0.2	93.7	2.2±0.2	1.2±0.2	107.4
C834S	2.9±0.4	1.3±0.3	95.5	2.1±0.5	1.4±0.5	105.8
C856S	3.2±0.3	1.8±0.5	98.4	1.9±0.8	1.1±0.3	98
C1025S	3.0±0.2	1.4±0.1	88.1	4.0±1.7	1.5±0.4	115.2
C1085S	3.2±0.5	1.3±0.3	96.2	3.2±1.0	1.2±0.3	124.2

statistics for histidine mutants

Plate #1	**Zinc**			**FFA**		
Clones	EC_{50}	nHill	Emax	EC_{50}	nHill	Emax
hTRP1-WT	3.1±0.7	1.3±0.4	100	4.9±0.9	1.8±0.5	100
H68A	3.1±0.4	1.1±0.2	99.5	5.6±0.9	1.6±0.4	110
H103A	2.8±0.4	1.3±0.2	116.7	3.6±0.7	1.5±0.4	127.8
H136A	2.9±0.5	1.2±0.3	85.3	4.1±0.6	1.3±0.2	93.7
H203A	N.D.		N.D.	N.D.		N.D.
H231A	2.4±0.9	1.1±0.5	93.8	3.6±0.9	1.2±0.3	118.5
H244A	3.6±0.9	1.2±0.3	81.6	4.1±0.3	1.6±0.3	103.9

Supplemental Table 2, Hu et al. cont.

Plate #2	**Zinc**			**FFA**		
Clones	EC_{50}	nHill	Emax	EC_{50}	nHill	Emax
hTRP1-WT	2.9±0.5	1.2±0.2	100	4.1±0.9	1.1±0.2	100
H277A	1.1±0.3	0.9±0.2	37.5	9.1±1.2	1.7±0.4	57.8
H314A	0.9±0.2	1.5±0.5	49.1	1.4±0.3	1.2±0.3	47.2
H321A/H322A	1.6±0.3	1.8±0.6	70.7	2.6±0.4	1.3±0.2	72.5
H380A	N.D.		N.D.	N.D.		N.D.
H418A	2.1±0.8	0.9±0.3	52.2	7.1±0.5	1.5±0.4	53.5
H451A	N.D.		N.D.	N.D.		N.D.

Plate #3	**Zinc**			**FFA**		
Clones	EC_{50}	nHill	Emax	EC_{50}	nHill	Emax
hTRP1-WT	2.0±0.3	1.1±0.2	100	4.3±1.0	1.1±0.2	100
H481A	1.8±0.3	1.5±0.3	106.3	3.3±0.6	1.4±0.3	99.6
H487A	2.2±0.3	1.3±0.2	92.2	4.8±0.9	1.1±0.2	99.96
H494A	1.0±0.6	1.4±0.1	33.9	8.2±1.3	1.3±0.3	56.5
H512A	1.5±0.3	1.2±0.3	88.2	1.9±0.4	0.9±0.2	85.3
H519A/H520A	N.D.		N.D.	N.D.		N.D.
H553A	N.D.		N.D.	N.D.		N.D.

Plate #4	**Zinc**			**FFA**		
Clones	EC_{50}	nHill	Emax	EC_{50}	nHill	Emax
hTRP1-WT	1.5±0.3	1.1±0.2	100	2.8±0.8	1.1±0.3	100
H560A	2.1±0.5	1.5±0.1	72.1	5.0±1.4	1.1±0.3	77.5
H585A	N.D.		N.D.	N.D.		N.D.
H589A	N.D.		N.D.	N.D.		N.D.
H614A	0.8±0.4	0.9±0.3	55.9	7.8±0.9	0.9±0.2	54.9
H700A	N.D.		N.D.	N.D.		N.D.
H719A	N.D.		N.D.	N.D.		N.D.
H1062A	2.1±0.3	1.6±0.4	87.1	2.7±0.3	1.2±0.1	86.21
H1084A	2.5±1.0	1.0±0.4	85	2.7±0.4	1.3±0.3	92.6

Plate #5	**Zinc**			**FFA**		
Clones	EC_{50}	nHill	Emax	EC_{50}	nHill	Emax
hTRP1-WT	2.0±0.3	1.5±0.3	100	1.5±0.2	1.4±0.2	100
H92A	2.0±0.3	1.4±0.3	98.1	1.8±0.4	1.4±0.4	139.7
H153A	2.2±0.5	1.6±0.5	97.9	2.0±0.3	1.3±0.3	128.5
H224A	2.3±0.4	1.4±0.3	95.3	2.2±0.4	1.2±0.2	120.7
H309A	2.9±0.9	1.5±0.6	88.6	2.8±0.2	1.1±0.1	99.4
H440A	2.6±0.4	1.3±0.3	83.2	2.2±0.2	1.1±0.1	129.6
H570A	1.9±0.3	1.3±0.3	98.9	1.6±0.2	1.2±0.2	130.9
H644A	1.8±0.3	1.3±0.3	89.2	1.3±0.1	1.1±0.1	100.7
H970A	0.7±0.2	0.9±0.2	43.6	1.1±0.1	1.0±0.1	49.2
H1018A	2.0±0.6	1.4±0.1	93.9	1.2±1.3	1.3±0.3	87.5
H1115A/H1116A	1.9±0.5	1.5±0.5	94.4	1.5±0.4	1.3±0.3	136.9

Supplemental Table 2, Hu et al. cont.

Plate #6	**Zinc**			**FFA**		
Clones	EC_{50}	nHill	Emax	EC_{50}	nHill	Emax
hTRP1-WT	2.2±0.3	1.3±0.2	100	4.3±0.7	1.4±0.2	100
H758A	2.6±0.2	1.6±0.3	125.1	3.1±0.4	1.5±0.3	121.1
H829A	2.5±0.4	1.1±0.2	115.3	4.6±1.2	1.1±0.5	113.4
H933A	1.8±0.4	1.5±0.4	105.1	3.0±0.9	2.6±0.7	104.8