Supplemental Table 1. Crystallographic Data

$P2_1$: HTMC2, *T. maritima* SMC hinge domain, residues 485-670
a=54.7 Å, b=57.9 Å, c=62.5 Å, β=112.4°, two molecules/ASU

$P2_12_12_1$: HTMC2
a=58.9 Å, b=62.2 Å, c=225.1 Å, twinning fraction 0.158, four molecules/ASU

C2 HTMC9, *T. maritima* SMC hinge domain, residues 473-685
a=136.7 Å, b=115.9 Å, 69.4 Å, β=93.4°, four molecules/ASU

Dataset	λ[Å]	SG	resol.[Å]	I/σI[1]	Rm[2]	multipl.[3]	compl.[%][4]
$P2_1$	0.9393	$P2_1$	2.0	12.2(4.3)	0.072	2.2	95.0
$P2_1$PK1	0.9784	$P2_1$	2.5	25.4(10.3)	0.037	5.1	98.8
$P2_1$PK2	0.9784	$P2_1$	2.5	27.1(10.4)	0.033	4.8	96.1
$P2_1$IN1	0.9793	$P2_1$	2.5	23.9(9.1)	0.040	5.1	98.9
$P2_1$IN2	0.9793	$P2_1$	2.5	31.2(12.0)	0.035	6.4	96.1
$P2_1$RE1	0.9500	$P2_1$	2.5	22.8(8.6)	0.044	5.1	98.8
$P2_1$RE2	0.9500	$P2_1$	2.5	29.3(8.7)	0.037	6.2	96.1
$P2_12_12_1$	0.9393	$P2_12_12_1$	3.0	10.6(3.1)	0.093	2.8	92.7
C2PK1	0.9793	C2	3.0	16.3(2.9)	0.075	5.1	95.1
C2PK2	0.9793	C2	3.2	16.2(4.4)	0.059	3.9	95.3

[1]Signal to noise ratio of intensities, highest resolution bin in brackets. [2]R_m: $\Sigma_h\Sigma_i|I(h,i)-I(h)| / \Sigma_h\Sigma_i I(h,i)$ where I(h,i) are symmetry related intensities and I(h) is the mean intensity of the reflection with unique index h. [3]Multiplicity for unique reflections, for MAD datasets I(+) and I(-) are kept separate. [4]Completeness of unique reflections, merged Friedel pairs. Correlation coefficients of anomalous differences at different wavelengths for the MAD experiment in $P2_1$: PEAK1 versus INFL1: 0.36, PEAK1 versus HREM1: 0.40, INFL1 versus HREM1: 0.28.