

Supplementary materials to Wilkins, Barton & Tidor (PLoS Computational Biology).

Supplementary Table 1: Alternate lumped parameter sets, the resulting period of oscillation and rankings of the corresponding top 25 scaled, unlumped sensitivities $\frac{\partial \ln T}{\partial \ln p_j}$. Boldface corresponds to modified parameter values. Nominal lumped rank is the ranking of period sensitivities when the parameters were not unlumped and period sensitivity analysis was performed on the original 38 parameters as published by Forger and Peskin. Orange – Nominal, lumped rank 1-5, Yellow – Nominal, lumped rank 6-10, Blue – Per2 related rate parameter, Pink – Kinase concentration.

<i>j</i>	1	2	3	4	5	6	7	8	9	10	11
1	10.0	20.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	20.0
2	1.031	1.031	1.031	1.031	1.031	1.031	1.031	1.031	1.031	1.031	1.031
3	2.533	2.533	2.533	2.533	2.533	2.533	2.533	2.533	5.067	2.533	1.267
4	6.784	3.392	1.696	6.784	3.392	1.696	1.696	1.696	3.392	3.392	1.696
5	0.165	0.082	0.165	0.082	0.082	0.165	0.165	0.082	0.165	0.082	0.082
6	0.090	0.090	0.045	0.090	0.090	0.045	0.090	0.180	0.090	0.180	0.180
7	0.436	0.872	0.436	0.872	0.436	0.436	0.436	0.436	0.436	0.872	0.436
8	0.594	0.594	0.594	0.297	0.594	0.594	1.188	0.297	0.297	0.594	0.594
9	0.465	0.465	0.465	0.465	0.465	0.465	0.465	0.465	0.465	0.465	0.465
10	5.087	10.173	5.087	5.087	10.173	5.087	5.087	5.087	10.173	5.087	5.087
11	0.266	0.266	0.133	0.266	0.266	0.133	0.266	0.533	0.133	0.266	0.266
12	0.352	0.352	0.352	0.352	0.176	0.352	0.352	0.352	0.352	0.352	0.352
13	2.307	1.153	1.153	2.307	2.307	1.153	1.153	1.153	2.307	2.307	2.307
14	0.713	0.713	0.713	0.713	0.713	0.713	0.713	0.713	0.713	0.357	0.713
15	0.836	0.418	0.836	0.836	0.836	0.836	0.836	0.418	0.836	1.673	0.836
16	0.143	0.143	0.143	0.286	0.286	0.143	0.286	0.286	0.572	0.286	0.572
17	1.453	1.453	1.453	0.727	1.453	1.453	1.453	1.453	0.727	1.453	1.453
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	15.423	7.712	7.712	7.712	7.712	7.712	7.712	7.712	7.712	15.423	7.712
20	738.3	1476.5	1476.5	1476.5	1476.5	1476.5	1476.5	1476.5	1476.5	1476.5	2953.0
21	23.78	23.78	23.78	47.56	11.89	23.78	11.89	23.78	23.78	23.78	23.78
22	807.4	807.4	1614.8	807.4	807.4	1614.8	807.4	807.4	1614.8	807.4	807.4

23	308.8	308.8	308.8	308.8	308.8	308.8	308.8	308.8	308.8	154.4	308.8
24	9.034	4.517	9.034	9.034	18.069	9.034	9.034	9.034	9.034	9.034	9.034
25	15.323	7.662	7.662	15.323	7.662	7.662	7.662	7.662	7.662	7.662	7.662
26	0.046	0.046	0.023	0.046	0.046	0.023	0.046	0.046	0.046	0.046	0.046
27	0.420	0.420	0.420	0.420	0.420	0.420	0.420	0.420	0.420	0.420	0.420
28	0.210	0.210	0.210	0.210	0.421	0.210	0.210	0.105	0.210	0.105	0.210
29	1.809	3.618	3.618	1.809	3.618	3.618	7.236	3.618	3.618	1.809	3.618
30	0.133	0.066	0.133	0.133	0.066	0.133	0.066	0.133	0.266	0.133	0.066
31	21.76	21.76	10.88	43.53	21.76	10.88	21.76	21.76	21.76	21.76	21.76
32	16.25	16.25	16.25	16.25	32.51	16.25	16.25	16.25	16.25	16.25	16.25
33	6.211	12.422	6.211	6.211	6.211	6.211	3.106	6.211	3.106	3.106	6.211
34	0.188	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377
35	0.299	0.597	0.299	0.597	0.597	0.299	0.299	0.597	0.299	0.299	0.299
36	15.11	15.11	7.56	15.11	7.56	7.56	15.11	30.22	15.11	15.11	7.56
37	0.00017	0.00034	0.00034	0.00034	0.00034	0.00034	0.00017	0.00034	0.00034	0.00017	0.00034
38	115.8	115.8	115.8	57.9	57.9	115.8	231.5	115.8	115.8	115.8	231.5

Period dlnT/dlnp rank	23.96 parameter number	23.991 parameter number	24.753 parameter number	24.849 parameter number	24.253 parameter number	24.653 parameter number	23.96 parameter number	23.666 parameter number	24.063 parameter number	24.413 parameter number	24.319 parameter number
1	224	34	34	34	34	34	34	34	34	34	34
2	17	224	224	224	224	224	224	224	223	224	224
3	34	222	17	8	17	17	17	17	16	180	19
4	66	17	19	17	19	19	19	19	39	211	17
5	19	19	66	231	66	66	66	66	23	17	66
6	65	231	91	19	91	91	91	91	9	66	91
7	222	66	27	222	64	27	27	21	224	209	223
8	91	8	35	66	27	35	223	20	22	24	16
9	35	149	56	211	7	56	35	27	1	2	23
10	231	91	7	91	35	7	209	38	19	25	39
11	7	211	209	65	56	222	7	222	10	40	171
12	209	201	222	39	23	40	199	223	56	99	21
13	211	27	65	23	39	22	56	201	64	173	1

14	27	43	23	56	222	23	171	56	33	93	22
15	38	38	39	149	184	39	23	211	27	39	20
16	49	56	171	24	163	147	39	165	43	23	27
17	39	65	199	2	65	65	16	2	5	190	9
18	23	147	223	223	223	231	163	24	41	91	163
19	134	23	43	157	38	149	40	16	231	179	33
20	180	39	147	40	209	155	25	39	222	97	64
21	8	64	231	25	43	58	21	23	8	7	38
22	41	157	40	22	25	163	20	173	38	186	222
23	157	49	25	1	40	171	64	199	91	223	10
24	56	20	211	41	1	49	222	65	122	21	56
25	171	51	149	16	22	41	1	209	17	20	24