

Supplementary File 1A

Homotypic crosslinks (basal, 30 min)				
#	Peptide	domain_a	domain_b	crosslinked lysines
1	AGAYDFPSPEWDTVTPEAKDLINK(19)-NFSGGKSGGNK(6)	kinase	linker	245-317
2	CVKVLAGEYAAK(3)-LLKHPNIVR(3)	kinase	kinase	32-68
3	DGKWQIVHFHR(3)-DHQKLER(4)	hub	kinase	461-56
4	DGKWQIVHFHR(3)-KQEIIK(1)	hub	hub	461-347
5	DGKWQIVHFHR(3)-KSDGVK(1)	hub	linker	461-323
6	DHQKLER(4)-DHQKLER(4)	kinase	kinase	56-56
7	DHQKLER(4)-IINTKK(5)	kinase	kinase	56-47
8	DHQKLER(4)-KSDGVK(1)	kinase	linker	56-323
9	DHQKLER(4)-LKGAAVK(2)	kinase	kinase	56-148
10	DLINKMLTINPSK(5)-DHQKLER(4)	kinase	kinase	250-56
11	DLINKMLTINPSK(5)-DLKPENLLLASK(3)	kinase	kinase	250-137
12	DLINKMLTINPSK(5)-KQEIIK(1)	kinase	hub	250-347
13	DLINKMLTINPSK(5)-LKGAAVK(2)	kinase	kinase	250-148
14	DLINKMLTINPSK(5)-MLTINPSKR(8)	kinase	kinase	250-258
15	DLKPENLLLASK(3)-DHQKLER(4)	kinase	kinase	137-56
16	DLKPENLLLASK(3)-DLKPENLLLASK(3)	kinase	kinase	137-137
17	DLKPENLLLASK(3)-KSDGVK(1)	kinase	linker	137-323
18	DLKPENLLLASK(3)-LKGAAVK(2)	kinase	kinase	137-148
19	DLKPENLLLASK(3)-LLKHPNIVR(3)	kinase	kinase	137-68
20	DLKPENLLLASK(3)-MLTINPSKR(8)	kinase	kinase	137-258
21	DLKPENLLLASK(3)-NFSGGKSGGNK(6)	kinase	linker	137-317
22	DLKPENLLLASKLK(12)-DHQKLER(4)	kinase	kinase	146-56
23	DLKPENLLLASKLK(12)-IINTKK(5)	kinase	kinase	146-47
24	DLKPENLLLASKLK(12)-KSDGVK(1)	kinase	linker	146-323
25	DLKPENLLLASKLK(12)-LKGAAVK(2)	kinase	kinase	146-148
26	DLKPENLLLASKLK(12)-LLKHPNIVR(3)	kinase	kinase	146-68
27	DLKPENLLLASKLK(12)-MLTINPSKR(8)	kinase	kinase	146-258
28	DLKPENLLLASKLK(12)-NFSGGKSGGNK(6)	kinase	linker	146-317
29	ESSESTNTTIEDEDTKVR(16)-DGKWQIVHFHR(3)	linker	hub	344-461
30	ESSESTNTTIEDEDTKVR(16)-DHQKLER(4)	hub	kinase	344-56
31	ESSESTNTTIEDEDTKVR(16)-ESSESTNTTIEDEDTKVR(16)	hub	hub	344-344
32	ESSESTNTTIEDEDTKVR(16)-KQEIIK(1)	hub	hub	344-347
33	ESSESTNTTIEDEDTKVR(16)-KSDGVK(1)	hub	linker	344-323
34	ESSESTNTTIEDEDTKVR(16)-LKGAAVK(2)	hub	kinase	344-148
35	ESSESTNTTIEDEDTKVR(16)-LKGAILTTMLATR(2)	hub	regulatory	344-300

36	ESSESTNTTIEDEDTKVR(16)-LLKHPNIVR(3)	hub	kinase	344-68
37	ESSESTNTTIEDEDTKVR(16)-MLTINPSKR(8)	hub	kinase	344-258
38	ESSESTNTTIEDEDTKVR(16)-NFSGGKSGGNK(6)	hub	linker	344-317
39	ESSESTNTTIEDEDTKVRK(16)-KQEIIK(1)	hub	hub	344-347
40	FTEEYQLFEELGKGAFSVVR(13)-DGKWQIVHFHR(3)	kinase	hub	21-461
41	FTEEYQLFEELGKGAFSVVR(13)-DHQKLER(4)	kinase	kinase	21-56
42	FTEEYQLFEELGKGAFSVVR(13)-DLKPENLLLASK(3)	kinase	kinase	21-137
43	FTEEYQLFEELGKGAFSVVR(13)-DLKPENLLLASKLK(12)	kinase	kinase	21-146
44	FTEEYQLFEELGKGAFSVVR(13)-IINTKK(5)	kinase	kinase	21-47
45	FTEEYQLFEELGKGAFSVVR(13)-KSDGVK(1)	kinase	linker	21-323
46	FTEEYQLFEELGKGAFSVVR(13)-LKGAILTTMLATR(2)	kinase	regulatory	21-300
47	FTEEYQLFEELGKGAFSVVR(13)-MLTINPSKR(8)	kinase	kinase	21-258
48	FTEEYQLFEELGKGAFSVVR(13)-NFSGGKSGGNK(6)	kinase	linker	21-317
49	FTEEYQLFEELGKGAFSVVR(13)-VLAGQEYAAKIINTK(10)	kinase	kinase	21-42
50	FTEEYQLFEELGKGAFSVVRR(13)-IINTKKLSAR(5)	kinase	kinase	21-47
51	GAAVKLADFLAIEVEGEQQAWFGFAGTPGYLSPEVLR(5)-LLKHPNIVR(3)	kinase	kinase	153-68
52	ITAAEALKHPWISHR(8)-DHQKLER(4)	kinase	kinase	267-56
53	ITAAEALKHPWISHR(8)-DLINKMLTINPSK(5)	kinase	kinase	267-250
54	ITAAEALKHPWISHR(8)-DLKPENLLLASK(3)	kinase	kinase	267-137
55	ITAAEALKHPWISHR(8)-KQEIIK(1)	kinase	hub	267-347
56	ITAAEALKHPWISHR(8)-KSDGVK(1)	kinase	linker	267-323
57	KLKGAILTTMLATR(3)-KLKGAILTTMLATR(1)	regulatory	regulatory	300-298
58	KQEIIK(1)-IINTKK(5)	hub	kinase	347-47
59	KQEIIK(1)-KQEIIK(1)	hub	hub	347-347
60	KQEIIK(1)-KSDGVK(1)	hub	linker	347-323
61	KQEIIK(1)-LKGAAVK(2)	hub	kinase	347-148
62	KSDGVKESSESTNTTIEDEDTK(1)-MLTINPSKR(8)	linker	kinase	323-258
63	KSDGVKESSESTNTTIEDEDTK(1)-NFSGGKSGGNK(6)	linker	linker	323-317
64	KSDGVKESSESTNTTIEDEDTK(6)-MLTINPSKR(8)	linker	kinase	328-258
65	KSDGVKESSESTNTTIEDEDTK(6)-NFSGGKSGGNK(6)	linker	linker	328-317
66	LKGAILTTMLATR(2)-DHQKLER(4)	regulatory	kinase	300-56
67	LKGAILTTMLATR(2)-DLKPENLLLASK(3)	regulatory	kinase	300-137
68	LKGAILTTMLATR(2)-KQEIIK(1)	regulatory	hub	300-347
69	LKGAILTTMLATR(2)-KSDGVK(1)	regulatory	linker	300-323
70	LKGAILTTMLATR(2)-LKGAAVK(2)	regulatory	kinase	300-148
71	LKGAILTTMLATR(2)-LKGAILTTMLATR(2)	regulatory	regulatory	300-300
72	LKGAILTTMLATR(2)-MLTINPSKR(8)	regulatory	kinase	300-258

73	LKGAILTTMLATR(2)-NFSGGKSGGNK(6)	regulatory	linker	300-317
74	LKGAILTTMLATR(2)-QETVDCLKK(8)	regulatory	regulatory	300-291
75	LLKHPNIVR(3)-DHQKLER(4)	kinase	kinase	68-56
76	LLKHPNIVR(3)-LKGA AVK(2)	kinase	kinase	68-148
77	LYQQIKAGAYDFPSPEWDTVPEAK(6)-DGKWQIVHFHR(3)	kinase	hub	226-461
78	LYQQIKAGAYDFPSPEWDTVPEAK(6)-DHQKLER(4)	kinase	kinase	226-56
79	LYQQIKAGAYDFPSPEWDTVPEAK(6)-DLKPENLLASKLK(12)	kinase	kinase	226-146
80	LYQQIKAGAYDFPSPEWDTVPEAK(6)-ITAAEALKHPWISHR(8)	kinase	kinase	226-267
81	LYQQIKAGAYDFPSPEWDTVPEAK(6)-KQEIIK(1)	kinase	hub	226-347
82	LYQQIKAGAYDFPSPEWDTVPEAK(6)-KSDGVK(1)	kinase	linker	226-323
83	LYQQIKAGAYDFPSPEWDTVPEAK(6)-LKGA AVK(2)	kinase	kinase	226-148
84	LYQQIKAGAYDFPSPEWDTVPEAK(6)-LKGAILTTMLATR(2)	kinase	regulatory	226-300
85	LYQQIKAGAYDFPSPEWDTVPEAK(6)-LLKHPNIVR(3)	kinase	kinase	226-68
86	LYQQIKAGAYDFPSPEWDTVPEAK(6)-MLTINPSKR(8)	kinase	kinase	226-258
87	LYQQIKAGAYDFPSPEWDTVPEAK(6)-NFSGGKSGGNK(6)	kinase	linker	226-317
88	LYQQIKAGAYDFPSPEWDTVPEAK(6)-SDGVKESSESTNTTIEDTK(5)	kinase	linker	226-328
89	LYQQIKAGAYDFPSPEWDTVPEAK(6)-VLAGQEYAAKIINTK(10)	kinase	kinase	226-42
90	MLTINPSKR(8)-DHQKLER(4)	kinase	kinase	258-56
91	MLTINPSKR(8)-IINTKK(5)	kinase	kinase	258-47
92	MLTINPSKR(8)-KQEIIK(1)	kinase	hub	258-347
93	MLTINPSKR(8)-KSDGVK(1)	kinase	linker	258-323
94	MLTINPSKR(8)-LKGA AVK(2)	kinase	kinase	258-148
95	MLTINPSKR(8)-MLTINPSKR(8)	kinase	kinase	258-258
96	MLTINPSKR(8)-NFSGGKSGGNK(6)	kinase	linker	258-317
97	NFSGGKSGGNK(6)-KQEIIK(1)	linker	hub	317-347
98	NFSGGKSGGNK(6)-KSDGVK(1)	linker	linker	317-323
99	NFSGGKSGGNK(6)-LKGA AVK(2)	linker	kinase	317-148
100	NFSGGKSGGNK(6)-NFSGGKSGGNK(6)	linker	linker	317-317
101	NSKPVHTTILNPHIHLMGDESACIAYIR(3)-DHQKLER(4)	hub	kinase	408-56
102	QETVDCLKK(8)-DHQKLER(4)	regulatory	kinase	291-56
103	QETVDCLKK(8)-KQEIIK(1)	regulatory	hub	291-347
104	QETVDCLKK(8)-KSDGVK(1)	regulatory	linker	291-323
105	QETVDCLKK(8)-LLKHPNIVR(3)	regulatory	kinase	291-68
106	QETVDCLKK(8)-NFSGGKSGGNK(6)	regulatory	linker	291-317
107	RDGWQIVHFHR(4)-SGGNKSDGVK(5)	hub	linker	461-322
108	RITAAEALKHPWISHR(9)-DLINKMLTINPSKR(13)	kinase	kinase	267-258
109	RITAAEALKHPWISHR(9)-DLINKMLTINPSKR(5)	kinase	kinase	267-250

110	RKLLGAILTTMLATR(2)-VLAGQEYAAKIINTK(10)	regulatory	kinase	298-42
111	RKLLGAILTTMLATR(4)-KSDGVK(1)	regulatory	linker	300-323
112	SDGVKESSESTNTTIEDEDTK(5)-DGKWQIVHFHR(3)	linker	hub	328-461
113	SDGVKESSESTNTTIEDEDTK(5)-DHQKLER(4)	linker	kinase	328-56
114	SDGVKESSESTNTTIEDEDTK(5)-DLKPENLLLASKLK(12)	linker	kinase	328-146
115	SDGVKESSESTNTTIEDEDTK(5)-ESSESTNTTIEDEDTKVR(16)	linker	linker	328-344
116	SDGVKESSESTNTTIEDEDTK(5)-IINTKK(5)	linker	kinase	328-47
117	SDGVKESSESTNTTIEDEDTK(5)-ITAAEALKHPWISHR(8)	linker	kinase	328-267
118	SDGVKESSESTNTTIEDEDTK(5)-KQEIIK(1)	linker	hub	328-347
119	SDGVKESSESTNTTIEDEDTK(5)-LKGAILTTMLATR(2)	linker	regulatory	328-300
120	SDGVKESSESTNTTIEDEDTK(5)-LLKHPNIVR(3)	linker	kinase	328-68
121	SDGVKESSESTNTTIEDEDTK(5)-MLTINPSKR(8)	linker	kinase	328-258
122	SDGVKESSESTNTTIEDEDTK(5)-NFSGGKSGGNK(6)	linker	linker	328-317
123	SDGVKESSESTNTTIEDEDTK(5)-RKLLGAILTTMLATR(2)	linker	regulatory	328-298
124	SDGVKESSESTNTTIEDEDTK(5)-VLAGQEYAAKIINTK(10)	linker	kinase	328-42
125	VLAGQEYAAKIINTK(10)-DHQKLER(4)	kinase	kinase	42-56
126	VLAGQEYAAKIINTK(10)-DLKPENLLLASKLK(3)	kinase	kinase	42-137
127	VLAGQEYAAKIINTK(10)-DLKPENLLLASKLK(12)	kinase	kinase	42-146
128	VLAGQEYAAKIINTK(10)-IINTKK(5)	kinase	kinase	42-47
129	VLAGQEYAAKIINTK(10)-KSDGVK(1)	kinase	linker	42-323
130	VLAGQEYAAKIINTK(10)-LKGAAVK(2)	kinase	kinase	42-148
131	VLAGQEYAAKIINTK(10)-LKGAILTTMLATR(2)	kinase	regulatory	42-300
132	VLAGQEYAAKIINTK(10)-LLKHPNIVR(3)	kinase	kinase	42-68
133	VLAGQEYAAKIINTK(10)-MLTINPSKR(8)	kinase	kinase	42-258
134	VLAGQEYAAKIINTK(10)-NFSGGKSGGNK(6)	kinase	linker	42-317
135	VLAGQEYAAKIINTK(10)-VLAGQEYAAKIINTK(10)	kinase	kinase	42-42
136	VLAGQEYAAKIINTKK(10)-DHQKLER(4)	kinase	kinase	42-56

Homotypic crosslinks (basal, 150 min)

#	Peptide	domain_a	domain_b	crosslinked lysines
1	AGAYDFPSPEWDTVPEAKDLINK(19)-DHQKLER(4)	kinase	kinase	245-56
2	AGAYDFPSPEWDTVPEAKDLINK(19)-DLKPENLLLASK(3)	kinase	kinase	245-137
3	AGAYDFPSPEWDTVPEAKDLINK(19)-IINTKK(5)	kinase	kinase	245-47
4	AGAYDFPSPEWDTVPEAKDLINK(19)-ITAAEALKHPWISHR(8)	kinase	kinase	245-267
5	AGAYDFPSPEWDTVPEAKDLINK(19)-KSDGVK(1)	kinase	linker	245-323
6	AGAYDFPSPEWDTVPEAKDLINK(19)-LKGAAVK(2)	kinase	kinase	245-148
7	AGAYDFPSPEWDTVPEAKDLINK(19)-LLKHPNIVR(3)	kinase	kinase	245-68
8	AGAYDFPSPEWDTVPEAKDLINK(19)-MLTINPSKR(8)	kinase	kinase	245-258
9	AGAYDFPSPEWDTVPEAKDLINK(19)-NFSGGKSGGNK(6)	kinase	linker	245-317
10	CVKVLAGEYAAK(3)-DHQKLER(4)	kinase	kinase	32-56
11	DGKWQIVHFHR(3)-KQEIIK(1)	hub	hub	461-347
12	DGKWQIVHFHR(3)-KSDGVK(1)	hub	linker	461-323
13	DHQKLER(4)-DHQKLER(4)	kinase	kinase	56-56
14	DHQKLER(4)-IINTKK(5)	kinase	kinase	56-47
15	DHQKLER(4)-KQEIIK(1)	kinase	hub	56-347
16	DHQKLER(4)-KSDGVK(1)	kinase	linker	56-323
17	DHQKLER(4)-LKGAAVK(2)	kinase	kinase	56-148
18	DLINKMLTINPSK(5)-DHQKLER(4)	kinase	kinase	250-56
19	DLINKMLTINPSK(5)-IINTKK(5)	kinase	kinase	250-47
20	DLINKMLTINPSK(5)-KQEIIK(1)	kinase	hub	250-347
21	DLINKMLTINPSK(5)-KSDGVK(1)	kinase	linker	250-323
22	DLINKMLTINPSK(5)-LKGAAVK(2)	kinase	kinase	250-148
23	DLINKMLTINPSK(5)-MLTINPSKR(8)	kinase	kinase	250-258
24	DLINKMLTINPSK(5)-NFSGGKSGGNK(6)	kinase	linker	250-317
25	DLKPENLLLASK(3)-DHQKLER(4)	kinase	kinase	137-56
26	DLKPENLLLASK(3)-DLKPENLLLASK(3)	kinase	kinase	137-137
27	DLKPENLLLASK(3)-IINTKK(5)	kinase	kinase	137-47
28	DLKPENLLLASK(3)-KSDGVK(1)	kinase	linker	137-323
29	DLKPENLLLASK(3)-LKGAAVK(2)	kinase	kinase	137-148
30	DLKPENLLLASK(3)-MLTINPSKR(8)	kinase	kinase	137-258
31	DLKPENLLLASK(3)-NFSGGKSGGNK(6)	kinase	linker	137-317
32	DLKPENLLLASK(3)-QETVDCLKK(8)	kinase	regulatory	137-291
33	DLKPENLLLASKLK(12)-DHQKLER(4)	kinase	kinase	146-56
34	DLKPENLLLASKLK(12)-DLKPENLLLASKLK(12)	kinase	kinase	146-146
35	DLKPENLLLASKLK(12)-LKGAAVK(2)	kinase	kinase	146-148

36	DLKPENLLLASKLK(12)-MLTINPSKR(8)	kinase	kinase	146-258
37	DLKPENLLLASKLK(12)-NFSGGKSGGNK(6)	kinase	linker	146-317
38	ESSESTNTTIEDEDTKVR(16)-DHQKLER(4)	hub	kinase	344-56
39	ESSESTNTTIEDEDTKVR(16)-DLKPENLLLASKLK(12)	hub	kinase	344-146
40	ESSESTNTTIEDEDTKVR(16)-ESSESTNTTIEDEDTKVR(16)	hub	hub	344-344
41	ESSESTNTTIEDEDTKVR(16)-ITAAEALKHPWISHR(8)	hub	kinase	344-267
42	ESSESTNTTIEDEDTKVR(16)-KQEIIK(1)	hub	hub	344-347
43	ESSESTNTTIEDEDTKVR(16)-KSDGVK(1)	hub	linker	344-323
44	ESSESTNTTIEDEDTKVR(16)-LKGAAVK(2)	hub	kinase	344-148
45	ESSESTNTTIEDEDTKVR(16)-LKGAILTTLATR(2)	hub	regulatory	344-300
46	ESSESTNTTIEDEDTKVR(16)-MLTINPSKR(8)	hub	kinase	344-258
47	ESSESTNTTIEDEDTKVR(16)-NFSGGKSGGNK(6)	hub	linker	344-317
48	ESSESTNTTIEDEDTKVR(16)-RCLKGAILTTLATR(2)	hub	regulatory	344-298
49	ESSESTNTTIEDEDTKVRK(16)-KQEIIK(1)	hub	hub	344-347
50	ESSESTNTTIEDEDTKVRK(16)-KSDGVK(1)	hub	linker	344-323
51	FTEEYQLFEELGKGAFSVVR(13)-DGKWQIVHFHR(3)	kinase	hub	21-461
52	FTEEYQLFEELGKGAFSVVR(13)-DHQKLER(4)	kinase	kinase	21-56
53	FTEEYQLFEELGKGAFSVVR(13)-DLKPENLLLASK(3)	kinase	kinase	21-137
54	FTEEYQLFEELGKGAFSVVR(13)-DLKPENLLLASKLK(12)	kinase	kinase	21-146
55	FTEEYQLFEELGKGAFSVVR(13)-IINTKK(5)	kinase	kinase	21-47
56	FTEEYQLFEELGKGAFSVVR(13)-ITAAEALKHPWISHR(8)	kinase	kinase	21-267
57	FTEEYQLFEELGKGAFSVVR(13)-KQEIIK(1)	kinase	hub	21-347
58	FTEEYQLFEELGKGAFSVVR(13)-KSDGVK(1)	kinase	linker	21-323
59	FTEEYQLFEELGKGAFSVVR(13)-LKGAAVK(2)	kinase	kinase	21-148
60	FTEEYQLFEELGKGAFSVVR(13)-LKGAILTTLATR(2)	kinase	regulatory	21-300
61	FTEEYQLFEELGKGAFSVVR(13)-MLTINPSKR(8)	kinase	kinase	21-258
62	FTEEYQLFEELGKGAFSVVR(13)-NFSGGKSGGNK(6)	kinase	linker	21-317
63	FTEEYQLFEELGKGAFSVVR(13)-VLAGQEYAAKIINTK(10)	kinase	kinase	21-42
64	FTEEYQLFEELGKGAFSVVRR(13)-IINTKKLSAR(5)	kinase	kinase	21-47
65	FTEEYQLFEELGKGAFSVVRR(13)-IINTKKLSAR(6)	kinase	kinase	21-48
66	GAAVKLADFGLAIEVEGEQQAWFGFAGTPGYLSPEVLR(5)-LLKHPNIVR(3)	kinase	kinase	153-68
67	IINTKK(5)-IINTKK(5)	kinase	kinase	47-47
68	IINTKK(5)-LKGAAVK(2)	kinase	kinase	47-148
69	ITAAEALKHPWISHR(8)-DLINKMLTINPSK(5)	kinase	kinase	267-250
70	ITAAEALKHPWISHR(8)-DLKPENLLLASK(3)	kinase	kinase	267-137
71	ITAAEALKHPWISHR(8)-KQEIIK(1)	kinase	hub	267-347
72	ITAAEALKHPWISHR(8)-KSDGVK(1)	kinase	linker	267-323

73	ITAAEALKHPWISHR(8)-MLTINPSKR(8)	kinase	kinase	267-258
74	KLKGAILTTMLATR(3)-KLKGAILTTMLATR(1)	regulatory	regulatory	300-298
75	KQEIIK(1)-IINTKK(5)	hub	kinase	347-47
76	KQEIIK(1)-KQEIIK(1)	hub	hub	347-347
77	KQEIIK(1)-KSDGVK(1)	hub	linker	347-323
78	KQEIIK(1)-LKGA AVK(2)	hub	kinase	347-148
79	KQEIIKVTEQLIEAISNGGFESYTK(1)-RDGKWQIVHFHR(4)	hub	hub	347-461
80	KQEIIKVTEQLIEAISNGGFESYTK(6)-DHQKLER(4)	hub	kinase	352-56
81	KQEIIKVTEQLIEAISNGGFESYTK(6)-NFSGGKSGGNK(6)	hub	linker	352-317
82	KSDGVKESSESTNTTIEDEDTK(6)-KQEIIK(1)	linker	hub	328-347
83	KSDGVKESSESTNTTIEDEDTK(6)-LKGAILTTMLATR(2)	linker	regulatory	328-300
84	KSDGVKESSESTNTTIEDEDTK(6)-NFSGGKSGGNK(6)	linker	linker	328-317
85	KSDGVKESSESTNTTIEDEDTKVR(22)-KQEIIK(1)	hub	hub	344-347
86	LKGA AVK(2)-LKGA AVK(2)	kinase	kinase	148-148
87	LKGAILTTMLATR(2)-DHQKLER(4)	regulatory	kinase	300-56
88	LKGAILTTMLATR(2)-DLKPENLLLASK(3)	regulatory	kinase	300-137
89	LKGAILTTMLATR(2)-KQEIIK(1)	regulatory	hub	300-347
90	LKGAILTTMLATR(2)-KSDGVK(1)	regulatory	linker	300-323
91	LKGAILTTMLATR(2)-MLTINPSKR(8)	regulatory	kinase	300-258
92	LKGAILTTMLATR(2)-NFSGGKSGGNK(6)	regulatory	linker	300-317
93	LKGAILTTMLATR(2)-QETVDCLKK(8)	regulatory	regulatory	300-291
94	LLKHPNIVR(3)-DHQKLER(4)	kinase	kinase	68-56
95	LLKHPNIVR(3)-KQEIIK(1)	kinase	hub	68-347
96	LLKHPNIVR(3)-LKGA AVK(2)	kinase	kinase	68-148
97	LLKHPNIVR(3)-MLTINPSKR(8)	kinase	kinase	68-258
98	LYQQIKAGAYDFPSPEWDTVPEAK(6)-DGKWQIVHFHR(3)	kinase	hub	226-461
99	LYQQIKAGAYDFPSPEWDTVPEAK(6)-DHQKLER(4)	kinase	kinase	226-56
100	LYQQIKAGAYDFPSPEWDTVPEAK(6)-DLINKMLTINPSK(5)	kinase	kinase	226-250
101	LYQQIKAGAYDFPSPEWDTVPEAK(6)-DLKPENLLLASK(3)	kinase	kinase	226-137
102	LYQQIKAGAYDFPSPEWDTVPEAK(6)-DLKPENLLLASKLK(12)	kinase	kinase	226-146
103	LYQQIKAGAYDFPSPEWDTVPEAK(6)-ESSESTNTTIEDEDTKVR(16)	kinase	hub	226-344
104	LYQQIKAGAYDFPSPEWDTVPEAK(6)-IINTKK(5)	kinase	kinase	226-47
105	LYQQIKAGAYDFPSPEWDTVPEAK(6)-ITAAEALKHPWISHR(8)	kinase	kinase	226-267
106	LYQQIKAGAYDFPSPEWDTVPEAK(6)-KQEIIK(1)	kinase	hub	226-347
107	LYQQIKAGAYDFPSPEWDTVPEAK(6)-KSDGVK(1)	kinase	linker	226-323
108	LYQQIKAGAYDFPSPEWDTVPEAK(6)-LKGA AVK(2)	kinase	kinase	226-148
109	LYQQIKAGAYDFPSPEWDTVPEAK(6)-LKGAILTTMLATR(2)	kinase	regulatory	226-300

110	LYQQIKAGAYDFPSPEWDTVPEAK(6)-LLKHPNIVR(3)	kinase	kinase	226-68
111	LYQQIKAGAYDFPSPEWDTVPEAK(6)-LYQQIKAGAYDFPSPEWDTVPEAK(6)	kinase	kinase	226-226
112	LYQQIKAGAYDFPSPEWDTVPEAK(6)-MLTINPSKR(8)	kinase	kinase	226-258
113	LYQQIKAGAYDFPSPEWDTVPEAK(6)-NFSGGKSGGNK(6)	kinase	linker	226-317
114	LYQQIKAGAYDFPSPEWDTVPEAK(6)-SDGVKESSESTNTTIEDTK(5)	kinase	linker	226-328
115	LYQQIKAGAYDFPSPEWDTVPEAK(6)-VLAGQEYAAKIINTK(10)	kinase	kinase	226-42
116	MLTINPSKR(8)-DHQKLER(4)	kinase	kinase	258-56
117	MLTINPSKR(8)-IINTKK(5)	kinase	kinase	258-47
118	MLTINPSKR(8)-KQEIIK(1)	kinase	hub	258-347
119	MLTINPSKR(8)-KSDGVK(1)	kinase	linker	258-323
120	MLTINPSKR(8)-LKGAAVK(2)	kinase	kinase	258-148
121	MLTINPSKR(8)-MLTINPSKR(8)	kinase	kinase	258-258
122	MLTINPSKR(8)-NFSGGKSGGNK(6)	kinase	linker	258-317
123	NFSGGKSGGNK(6)-DHQKLER(4)	linker	kinase	317-56
124	NFSGGKSGGNK(6)-KQEIIK(1)	linker	hub	317-347
125	NFSGGKSGGNK(6)-KSDGVK(1)	linker	linker	317-323
126	NFSGGKSGGNK(6)-LKGAAVK(2)	linker	kinase	317-148
127	NFSGGKSGGNK(6)-NFSGGKSGGNK(6)	linker	linker	317-317
128	QEIIKVTEQLIEAISNGGFESYTK(5)-DGKWQIVHFHR(3)	hub	hub	352-461
129	QEIIKVTEQLIEAISNGGFESYTK(5)-DHQKLER(4)	hub	kinase	352-56
130	QEIIKVTEQLIEAISNGGFESYTK(5)-MLTINPSKR(8)	hub	kinase	352-258
131	QEIIKVTEQLIEAISNGGFESYTK(5)-NFSGGKSGGNK(6)	hub	linker	352-317
132	QETVDCLKK(8)-DHQKLER(4)	regulatory	kinase	291-56
133	QETVDCLKK(8)-KQEIIK(1)	regulatory	hub	291-347
134	QETVDCLKK(8)-KSDGVK(1)	regulatory	linker	291-323
135	QETVDCLKK(8)-LLKHPNIVR(3)	regulatory	kinase	291-68
136	QETVDCLKK(8)-NFSGGKSGGNK(6)	regulatory	linker	291-317
137	RDGKWQIVHFHR(4)-SGGNKSDGVK(5)	hub	linker	461-322
138	RKLGAILTTMLATR(2)-DLKPENLLLASK(3)	regulatory	kinase	298-137
139	RKLGAILTTMLATR(2)-RKLGAILTTMLATR(2)	regulatory	regulatory	298-298
140	RKLGAILTTMLATR(2)-VLAGQEYAAKIINTK(10)	regulatory	kinase	298-42
141	RKLGAILTTMLATR(4)-DHQKLER(4)	regulatory	kinase	300-56
142	SDGVKESSESTNTTIEDTK(5)-DGKWQIVHFHR(3)	linker	hub	328-461
143	SDGVKESSESTNTTIEDTK(5)-DHQKLER(4)	linker	kinase	328-56
144	SDGVKESSESTNTTIEDTK(5)-DLINKMLTINPSK(5)	linker	kinase	328-250
145	SDGVKESSESTNTTIEDTK(5)-DLKPENLLLASK(3)	linker	kinase	328-137
146	SDGVKESSESTNTTIEDTK(5)-DLKPENLLLASKLK(12)	linker	kinase	328-146

147	SDGVKESSESTNTTIEDEDTK(5)-ESSESTNTTIEDEDTKVR(16)	linker	hub	328-344
148	SDGVKESSESTNTTIEDEDTK(5)-ITAAEALKHPWISHR(8)	linker	kinase	328-267
149	SDGVKESSESTNTTIEDEDTK(5)-KQEIIK(1)	linker	hub	328-347
150	SDGVKESSESTNTTIEDEDTK(5)-KSDGVK(1)	linker	linker	328-323
151	SDGVKESSESTNTTIEDEDTK(5)-LKGAAVK(2)	linker	kinase	328-148
152	SDGVKESSESTNTTIEDEDTK(5)-LKGAILTTMLATR(2)	linker	regulatory	328-300
153	SDGVKESSESTNTTIEDEDTK(5)-LLKHPNIVR(3)	linker	kinase	328-68
154	SDGVKESSESTNTTIEDEDTK(5)-MLTINPSKR(8)	linker	kinase	328-258
155	SDGVKESSESTNTTIEDEDTK(5)-NFSGGKSGGNK(6)	linker	linker	328-317
156	SDGVKESSESTNTTIEDEDTK(5)-NFSGGKSGGNKK(6)	linker	linker	328-317
157	SDGVKESSESTNTTIEDEDTK(5)-RKLKGAILTTMLATR(2)	linker	regulatory	328-298
158	SDGVKESSESTNTTIEDEDTK(5)-VLAGQEYAAKIINTK(10)	linker	kinase	328-42
159	VLAGQEYAAKIINTK(10)-DHQKLER(4)	kinase	kinase	42-56
160	VLAGQEYAAKIINTK(10)-DLKPENLLLASK(3)	kinase	kinase	42-137
161	VLAGQEYAAKIINTK(10)-DLKPENLLLASKLK(12)	kinase	kinase	42-146
162	VLAGQEYAAKIINTK(10)-KSDGVK(1)	kinase	linker	42-323
163	VLAGQEYAAKIINTK(10)-LKGAAVK(2)	kinase	kinase	42-148
164	VLAGQEYAAKIINTK(10)-LKGAILTTMLATR(2)	kinase	regulatory	42-300
165	VLAGQEYAAKIINTK(10)-LLKHPNIVR(3)	kinase	kinase	42-68
166	VLAGQEYAAKIINTK(10)-MLTINPSKR(8)	kinase	kinase	42-258
167	VLAGQEYAAKIINTK(10)-NFSGGKSGGNK(6)	kinase	linker	42-317
168	VLAGQEYAAKIINTK(10)-DHQKLER(4)	kinase	kinase	42-56

Heterotypic crosslinks (basal, 30 min)

#	Peptides	domain_a	domain_b	crosslinked lysines	R sample 1	R sample 2
1	DGKWQIVHFHR(3)-DLKPENLLLASK(3)	hub	kinase	461-137	0,15	0,12
2	LLKHPNIVR(3)-KQEIIK(1)	kinase	hub	68-347	0,08	0,13
3	ESSESTNTTIEDEDTKVR(16)-IINTKK(5)	hub	kinase	344-47	0,02	0,05

Heterotypic crosslinks (basal, 150 min)						
#	Peptides	domain_a	domain_b	crosslinked lysines	R sample 1	R sample 2
1	DGKWQIVHFHR(3)-DLKPENLLLASK(3)	hub	kinase	461-137	0,12	0,09
2	DLKPENLLLASK(3)-KQEIIK(1)	kinase	hub	137-347	0,09	0,08
3	DLKPENLLLASKLK(12)-DLINKMLTINPSK(5)	kinase	kinase	146-250	0,05	0,08
4	DLKPENLLLASKLK(12)-DLKPENLLLASK(3)	kinase	kinase	146-137	0,10	0,08
5	DLKPENLLLASKLK(12)-IINTKK(5)	kinase	kinase	146-47	0,06	0,07
6	ESSESTNTTIEDEDTKVR(16)-DLKPENLLLASK(3)	hub	kinase	344-137	0,09	0,13
7	ITAAEALKHPWISHR(8)-DLKPENLLLASKLK(12)	kinase	kinase	267-146	0,07	0,28
8	VLAGQEYAAKIINTK(10)-DLINKMLTINPSK(5)	kinase	kinase	42-250	0,06	0,06

Homotypic crosslinks (activated, 30 min)

#	Peptide	domain_a	domain_b	crosslinked lysines
1	AGAYDFPSPEWDTVPEAKDLINK(19)-DHQKLER(4)	kinase	kinase	245-56
2	AGAYDFPSPEWDTVPEAKDLINK(19)-DLKPENLLLASK(3)	kinase	kinase	245-137
3	AGAYDFPSPEWDTVPEAKDLINK(19)-ITAAEALKHPWISHR(8)	kinase	kinase	245-267
4	AGAYDFPSPEWDTVPEAKDLINK(19)-KQEIIK(1)	kinase	hub	245-347
5	CVKVLAGEYAAK(3)-IINTKK(5)	kinase	kinase	32-47
6	CVKVLAGEYAAK(3)-LLKHPNIVR(3)	kinase	kinase	32-68
7	DGKWQIVHFHR(3)-KQEIIK(1)	hub	hub	461-347
8	DGKWQIVHFHR(3)-KSDGVK(1)	hub	linker	461-323
9	DGKWQIVHFHR(3)-NFSGGKSGGNK(6)	hub	linker	461-317
10	DHQKLER(4)-DHQKLER(4)	kinase	kinase	56-56
11	DHQKLER(4)-IINTKK(5)	kinase	kinase	56-47
12	DLINKMLTINPSK(5)-DLKPENLLLASK(3)	kinase	kinase	250-137
13	DLKPENLLLASK(3)-DHQKLER(4)	kinase	kinase	137-56
14	DLKPENLLLASK(3)-DLKPENLLLASK(3)	kinase	kinase	137-137
15	DLKPENLLLASK(3)-KSDGVK(1)	kinase	linker	137-323
16	DLKPENLLLASK(3)-LKGAAVK(2)	kinase	kinase	137-148
17	DLKPENLLLASK(3)-MLTINPSKR(8)	kinase	kinase	137-258
18	DLKPENLLLASK(3)-NFSGGKSGGNK(6)	kinase	linker	137-317
19	DLKPENLLLASKLK(12)-DHQKLER(4)	kinase	kinase	146-56
20	DLKPENLLLASKLK(12)-KSDGVK(1)	kinase	linker	146-323
21	DLKPENLLLASKLK(12)-LLKHPNIVR(3)	kinase	kinase	146-68
22	ESSESTNTTIEDEDTKVR(16)-DGKWQIVHFHR(3)	hub	hub	344-461
23	ESSESTNTTIEDEDTKVR(16)-ESSESTNTTIEDEDTKVR(16)	hub	hub	344-344
24	ESSESTNTTIEDEDTKVR(16)-KQEIIK(1)	hub	hub	344-347
25	ESSESTNTTIEDEDTKVR(16)-KSDGVK(1)	hub	linker	344-323
26	ESSESTNTTIEDEDTKVR(16)-NFSGGKSGGNK(6)	hub	linker	344-317
27	ESSESTNTTIEDEDTKVRK(16)-ESSESTNTTIEDEDTKVR(16)	hub	hub	344-344
28	ESSESTNTTIEDEDTKVRK(16)-KQEIIK(1)	hub	hub	344-347
29	IINTKK(5)-IINTKK(5)	kinase	kinase	47-47
30	IINTKK(5)-LKGAAVK(2)	kinase	kinase	47-148
31	ITAAEALKHPWISHR(8)-DLINKMLTINPSK(5)	kinase	kinase	267-250
32	ITAAEALKHPWISHR(8)-DLKPENLLLASKLK(12)	kinase	kinase	267-146
33	ITAAEALKHPWISHR(8)-ITAAEALKHPWISHR(8)	kinase	kinase	267-267
34	ITAAEALKHPWISHR(8)-KQEIIK(1)	kinase	hub	267-347
35	ITAAEALKHPWISHR(8)-KSDGVK(1)	kinase	linker	267-323

36	ITAAEALKHPWISHR(8)-LKGA AVK(2)	kinase	kinase	267-148
37	ITAAEALKHPWISHR(8)-MLTINPSKR(8)	kinase	kinase	267-258
38	ITAAEALKHPWISHR(8)-NFSGGKSGGNK(6)	kinase	linker	267-317
39	KQEIIK(1)-IINTKK(5)	hub	kinase	347-47
40	KQEIIK(1)-KSDGVK(1)	hub	linker	347-323
41	KQEIIK(1)-LKGA AVK(2)	hub	kinase	347-148
42	KSDGVKESSESTNTTIEDEDTK(6)-KQEIIK(1)	linker	hub	328-347
43	KSDGVKESSESTNTTIEDEDTK(6)-NFSGGKSGGNK(6)	linker	linker	328-317
44	LKGA AVK(2)-LKGA AVK(2)	kinase	kinase	148-148
45	LKGAILTTMLATR(2)-DHQKLER(4)	regulatory	kinase	300-56
46	LKGAILTTMLATR(2)-KSDGVK(1)	regulatory	linker	300-323
47	LKGAILTTMLATR(2)-NFSGGKSGGNK(6)	regulatory	linker	300-317
48	LLKHPNIVR(3)-DHQKLER(4)	kinase	kinase	68-56
49	LLKHPNIVR(3)-KQEIIK(1)	kinase	hub	68-347
50	LLKHPNIVR(3)-LLKHPNIVR(3)	kinase	kinase	68-68
51	LYQQIKAGAYDFPSPEWDTVPEAK(6)-DHQKLER(4)	kinase	kinase	226-56
52	LYQQIKAGAYDFPSPEWDTVPEAK(6)-DLKPENLLLASKLK(12)	kinase	kinase	226-146
53	LYQQIKAGAYDFPSPEWDTVPEAK(6)-IINTKK(5)	kinase	kinase	226-47
54	LYQQIKAGAYDFPSPEWDTVPEAK(6)-KSDGVK(1)	kinase	linker	226-323
55	LYQQIKAGAYDFPSPEWDTVPEAK(6)-LYQQIKAGAYDFPSPEWDTVPEAK(6)	kinase	kinase	226-226
56	LYQQIKAGAYDFPSPEWDTVPEAK(6)-MLTINPSKR(8)	kinase	kinase	226-258
57	LYQQIKAGAYDFPSPEWDTVPEAK(6)-NFSGGKSGGNK(6)	kinase	linker	226-317
58	MLTINPSKR(8)-DHQKLER(4)	kinase	kinase	258-56
59	MLTINPSKR(8)-IINTKK(5)	kinase	kinase	258-47
60	MLTINPSKR(8)-KQEIIK(1)	kinase	hub	258-347
61	MLTINPSKR(8)-KSDGVK(1)	kinase	linker	258-323
62	MLTINPSKR(8)-LKGA AVK(2)	kinase	kinase	258-148
63	MLTINPSKR(8)-MLTINPSKR(8)	kinase	kinase	258-258
64	MLTINPSKR(8)-NFSGGKSGGNK(6)	kinase	linker	258-317
65	NFSGGKSGGNK(6)-KQEIIK(1)	linker	hub	317-347
66	NFSGGKSGGNK(6)-KSDGVK(1)	linker	linker	317-323
67	NFSGGKSGGNK(6)-NFSGGKSGGNK(6)	linker	linker	317-317
68	QETVDCLKK(8)-LLKHPNIVR(3)	regulatory	kinase	291-68
69	RITAAEALKHPWISHR(9)-DLINKMLTINPSKR(13)	kinase	kinase	267-258
70	RITAAEALKHPWISHR(9)-DLINKMLTINPSKR(5)	kinase	kinase	267-250
71	SDGVKESSESTNTTIEDEDTK(5)-DGKWQIVHFHR(3)	linker	hub	328-461
72	SDGVKESSESTNTTIEDEDTK(5)-ESSESTNTTIEDEDTKVR(16)	linker	HUB	328-344

73	SDGVKESSESTNTTIEDEDTK(5)-KQEIIK(1)	linker	hub	328-347
74	SDGVKESSESTNTTIEDEDTK(5)-KSDGVK(1)	linker	linker	328-323
75	SDGVKESSESTNTTIEDEDTK(5)-LKGAAVK(2)	linker	kinase	328-148
76	SDGVKESSESTNTTIEDEDTK(5)-LLKHPNIVR(3)	linker	kinase	328-68
77	SDGVKESSESTNTTIEDEDTK(5)-MLTINPSKR(8)	linker	kinase	328-258
78	SDGVKESSESTNTTIEDEDTK(5)-NFSGGKSGGNK(6)	linker	linker	328-317
79	SDGVKESSESTNTTIEDEDTK(5)-NFSGGKSGGNK(6)	linker	linker	328-317
80	SDGVKESSESTNTTIEDEDTK(5)-SDGVKESSESTNTTIEDEDTK(5)	linker	linker	328-328
81	SDGVKESSESTNTTIEDEDTKVR(21)-KQEIIK(1)	hub	hub	344-347
82	VLAGQEYAAKIINTK(10)-DHQKLER(4)	kinase	kinase	42-56
83	VLAGQEYAAKIINTK(10)-LLKHPNIVR(3)	kinase	kinase	42-68
84	VLAGQEYAAKIINTK(10)-MLTINPSKR(8)	kinase	kinase	42-258
85	VLAGQEYAAKIINTK(10)-VLAGQEYAAKIINTK(10)	kinase	kinase	42-42

Supplementary File 1F

Homotypic crosslinks (activated, 150 min)				
#	Peptide	domain_a	domain_b	crosslinked lysines
1	AGAYDFPSPEWDTVTPEAKDLINK(19)-DGKWQIVHFHR(3)	kinase	hub	245-461
2	AGAYDFPSPEWDTVTPEAKDLINK(19)-ITAAEALKHPWISHR(8)	kinase	kinase	245-267
3	AGAYDFPSPEWDTVTPEAKDLINK(19)-MLTINPSKR(8)	kinase	kinase	245-258
4	AGAYDFPSPEWDTVTPEAKDLINK(19)-NFSGGKSGGNK(6)	kinase	linker	245-317
5	CVKVLAGEEYAAK(3)-IINTKK(5)	kinase	kinase	32-47
6	DGKWQIVHFHR(3)-KQEIIK(1)	hub	hub	461-347
7	DGKWQIVHFHR(3)-KSDGVK(1)	hub	linker	461-323
8	DGKWQIVHFHR(3)-NFSGGKSGGNK(6)	hub	linker	461-317
9	DHQKLER(4)-DHQKLER(4)	kinase	kinase	56-56
10	DHQKLER(4)-IINTKK(5)	kinase	kinase	56-47
11	DLINKMLTINPSK(5)-DHQKLER(4)	kinase	kinase	250-56
12	DLINKMLTINPSK(5)-DLINKMLTINPSK(5)	kinase	kinase	250-250
13	DLINKMLTINPSK(5)-NFSGGKSGGNK(6)	kinase	linker	250-317
14	DLINKMLTINPSKR(5)-DLINKMLTINPSKR(13)	kinase	kinase	250-258
15	DLKPENLLLASK(3)-DLKPENLLLASK(3)	kinase	kinase	137-137
16	DLKPENLLLASK(3)-LKGAAVK(2)	kinase	kinase	137-148
17	DLKPENLLLASK(3)-NFSGGKSGGNK(6)	kinase	linker	137-317
18	DLKPENLLLASKLK(12)-DHQKLER(4)	kinase	kinase	146-56
19	DLKPENLLLASKLK(12)-DLKPENLLLASKLK(12)	kinase	kinase	146-146
20	ESSESTNTTIEDEDTKVR(16)-DGKWQIVHFHR(3)	hub	hub	344-461
21	ESSESTNTTIEDEDTKVR(16)-ESSESTNTTIEDEDTKVR(16)	hub	hub	344-344
22	ESSESTNTTIEDEDTKVR(16)-ITAAEALKHPWISHR(8)	hub	kinase	344-267
23	ESSESTNTTIEDEDTKVR(16)-KQEIIK(1)	hub	hub	344-347
24	ESSESTNTTIEDEDTKVR(16)-KSDGVK(1)	hub	linker	344-323
25	ESSESTNTTIEDEDTKVR(16)-LLKHPNIVR(3)	hub	kinase	344-68
26	ESSESTNTTIEDEDTKVR(16)-MLTINPSKR(8)	hub	kinase	344-258
27	ESSESTNTTIEDEDTKVR(16)-NFSGGKSGGNK(6)	hub	linker	344-317
28	ESSESTNTTIEDEDTKVRK(16)-KQEIIK(1)	hub	hub	344-347
29	IINTKK(5)-IINTKK(5)	kinase	kinase	47-47
30	IINTKK(5)-LKGAAVK(2)	kinase	kinase	47-148
31	ITAAEALKHPWISHR(8)-DHQKLER(4)	kinase	kinase	267-56
32	ITAAEALKHPWISHR(8)-DLINKMLTINPSK(5)	kinase	kinase	267-250
33	ITAAEALKHPWISHR(8)-DLKPENLLLASK(3)	kinase	kinase	267-137
34	ITAAEALKHPWISHR(8)-KQEIIK(1)	kinase	hub	267-347
35	ITAAEALKHPWISHR(8)-KSDGVK(1)	kinase	linker	267-323

36	ITAAEALKHPWISHR(8)-MLTINPSKR(8)	kinase	kinase	267-258
37	ITAAEALKHPWISHR(8)-NFSGGKSGGNK(6)	kinase	linker	267-317
38	KQEIIK(1)-KQEIIK(1)	hub	hub	347-347
39	KQEIIK(1)-KSDGVK(1)	hub	linker	347-323
40	KQEIIK(1)-LKGA AVK(2)	hub	kinase	347-148
41	KQEIIKVTEQLIEAISNGGFESYTK(1)-RDGKWQIVHFHR(4)	hub	hub	347-461
42	KQEIIKVTEQLIEAISNGGFESYTK(6)-ESSESTNTTIEDEDTKVR(16)	hub	hub	352-344
43	KQEIIKVTEQLIEAISNGGFESYTK(6)-KSDGVK(1)	hub	linker	352-323
44	KSDGVKESSESTNTTIEDEDTK(6)-NFSGGKSGGNK(6)	linker	linker	328-317
45	LKGAILTTMLATR(2)-KQEIIK(1)	regulatory	hub	300-347
46	LKGAILTTMLATR(2)-KSDGVK(1)	regulatory	linker	300-323
47	LKGAILTTMLATR(2)-NFSGGKSGGNK(6)	regulatory	linker	300-317
48	LKGAILTTMLATR(2)-QETVDCLKK(8)	regulatory	regulatory	300-291
49	LLKHPNIVR(3)-DHQKLER(4)	kinase	kinase	68-56
50	LLKHPNIVR(3)-NFSGGKSGGNK(6)	kinase	linker	68-317
51	LYQQIKAGAYDFPSPEWDTVPEAK(6)-DGKWQIVHFHR(3)	kinase	hub	226-461
52	LYQQIKAGAYDFPSPEWDTVPEAK(6)-DHQKLER(4)	kinase	kinase	226-56
53	LYQQIKAGAYDFPSPEWDTVPEAK(6)-DLINKMLTINPSK(5)	kinase	kinase	226-250
54	LYQQIKAGAYDFPSPEWDTVPEAK(6)-ITAAEALKHPWISHR(8)	kinase	kinase	226-267
55	LYQQIKAGAYDFPSPEWDTVPEAK(6)-LYQQIKAGAYDFPSPEWDTVPEAK(6)	kinase	kinase	226-226
56	LYQQIKAGAYDFPSPEWDTVPEAK(6)-MLTINPSKR(8)	kinase	kinase	226-258
57	LYQQIKAGAYDFPSPEWDTVPEAK(6)-NFSGGKSGGNK(6)	kinase	linker	226-317
58	MLTINPSKR(8)-DHQKLER(4)	kinase	kinase	258-56
59	MLTINPSKR(8)-KQEIIK(1)	kinase	hub	258-347
60	MLTINPSKR(8)-KSDGVK(1)	kinase	linker	258-323
61	MLTINPSKR(8)-LKGA AVK(2)	kinase	kinase	258-148
62	MLTINPSKR(8)-MLTINPSKR(8)	kinase	kinase	258-258
63	MLTINPSKR(8)-NFSGGKSGGNK(6)	kinase	linker	258-317
64	NFSGGKSGGNK(6)-KQEIIK(1)	linker	hub	317-347
65	NFSGGKSGGNK(6)-KSDGVK(1)	linker	linker	317-323
66	NFSGGKSGGNK(6)-LKGA AVK(2)	linker	kinase	317-148
67	NFSGGKSGGNK(6)-NFSGGKSGGNK(6)	linker	linker	317-317
68	QEIIKVTEQLIEAISNGGFESYTK(5)-DGKWQIVHFHR(3)	hub	hub	352-461
69	RITAAEALKHPWISHR(9)-DLINKMLTINPSKR(13)	kinase	kinase	267-258
70	RITAAEALKHPWISHR(9)-DLINKMLTINPSKR(5)	kinase	kinase	267-250
71	SDGVKESSESTNTTIEDEDTK(5)-DGKWQIVHFHR(3)	linker	hub	328-461
72	SDGVKESSESTNTTIEDEDTK(5)-DHQKLER(4)	linker	kinase	328-56

73	SDGVKESSESTNTTIEDEDTK(5)-DLINKMLTINPSK(5)	linker	kinase	328-250
74	SDGVKESSESTNTTIEDEDTK(5)-ESSESTNTTIEDEDTKVR(16)	linker	hub	328-344
75	SDGVKESSESTNTTIEDEDTK(5)-ITAAEALKHPWISHR(8)	linker	kinase	328-267
76	SDGVKESSESTNTTIEDEDTK(5)-KQEIIK(1)	linker	hub	328-347
77	SDGVKESSESTNTTIEDEDTK(5)-KSDGVK(1)	linker	linker	328-323
78	SDGVKESSESTNTTIEDEDTK(5)-LKGAILTTMLATR(2)	linker	regulatory	328-300
79	SDGVKESSESTNTTIEDEDTK(5)-LLKHPNIVR(3)	linker	kinase	328-68
80	SDGVKESSESTNTTIEDEDTK(5)-MLTINPSKR(8)	linker	kinase	328-258
81	SDGVKESSESTNTTIEDEDTK(5)-NFSGGKSGGNK(6)	linker	linker	328-317
82	SDGVKESSESTNTTIEDEDTK(5)-NFSGGKSGGNKK(6)	linker	linker	328-317
83	SDGVKESSESTNTTIEDEDTK(5)-RKLKGAILTTMLATR(2)	linker	regulatory	328-298
84	SDGVKESSESTNTTIEDEDTK(5)-SDGVKESSESTNTTIEDEDTK(5)	linker	linker	328-328
85	VLAGEYAAKIINTK(10)-DHQKLER(4)	kinase	kinase	42-56
86	VLAGEYAAKIINTK(10)-VLAGEYAAKIINTK(10)	kinase	kinase	42-42

Supplementary File 1G

Heterotypic crosslinks (activated, 30 min)

#	Peptides	domain_a	domain_b	crosslinked lysines	R sample 1	R sample 2
1	DLKPENLLLASK(3)-IINTKK(5)	kinase	kinase	137-47	1,63	0,22
2	FTEEYQLFEELGKGAFSVVR(13)-MLTINPSKR(8)	kinase	kinase	21-258	0,55	0,15
3	VLAGEYAAKIINTK(10)-DLINKMLTINPSK(5)	kinase	kinase	42-250	0,35	0,34
4	DLKPENLLLASKLK(12)-DLKPENLLLASK(3)	kinase	kinase	146-137	0,34	0,22
5	ESSESTNTTIEDTKVR(16)-DLKPENLLLASK(3)	hub	kinase	344-137	0,33	0,19
6	ITAAEALKHPWISHR(8)-VLAGEYAAKIINTK(10)	kinase	kinase	267-42	0,29	0,24
7	NFSGGKSGGNK(6)-DHQKLER(4)	linker	kinase	317-56	0,27	0,21
8	LKGAILTTMLATR(2)-DLKPENLLLASK(3)	regulatory	kinase	300-137	0,26	0,12
9	MLTINPSKR(8)-LLKHPNIVR(3)	kinase	kinase	258-68	0,25	0,19
10	LYQQIKAGAYDFPSPEWDTVTPEAK(6)-VLAGEYAAKIINTK(10)	kinase	kinase	226-42	0,24	0,15
11	FTEEYQLFEELGKGAFSVVR(13)-LLKHPNIVR(3)	kinase	kinase	21-68	0,23	0,17
12	FTEEYQLFEELGKGAFSVVR(13)-LKGAAVK(2)	kinase	kinase	21-148	0,23	0,20
13	ITAAEALKHPWISHR(8)-IINTKK(5)	kinase	kinase	267-47	0,22	0,18
14	DLKPENLLLASKLK(12)-LKGAAVK(2)	kinase	kinase	146-148	0,22	0,27
15	LLKHPNIVR(3)-IINTKK(5)	kinase	kinase	68-47	0,21	0,22
16	AGAYDFPSPEWDTVTPEAKDLINK(19)-LLKHPNIVR(3)	kinase	kinase	245-68	0,19	0,35
17	DHQKLER(4)-KSDGVK(1)	kinase	linker	56-323	0,16	0,17
18	FTEEYQLFEELGKGAFSVVR(13)-DHQKLER(4)	kinase	kinase	21-56	0,15	0,12
19	VLAGEYAAKIINTK(10)-DLKPENLLLASK(3)	kinase	kinase	42-137	0,15	0,21
20	ESSESTNTTIEDTKVR(16)-ITAAEALKHPWISHR(8)	hub	kinase	344-267	0,05	0,12

Supplementary File 1H

Heterotypic crosslinks (activated, 150 min)

#	Peptides	domain_a	domain_b	crosslinked lysines	R sample 1	R sample 2
1	VLAGEYAAKIINTK(10)-DLKPENLLLASKLK(12)	kinase	kinase	42-146	0,56	0,40
2	FTEEQYLFEEELGKGAFSVVR(13)-ITAAEALKHPWISHR(8)	kinase	kinase	21-267	0,48	0,45
3	DLKPENLLLASKLK(12)-DLINKMLTINPSK(5)	kinase	kinase	146-250	0,41	0,34
4	DLKPENLLLASK(3)-LLKHPNIVR(3)	kinase	kinase	137-68	0,37	0,30
5	DLKPENLLLASKLK(12)-DLKPENLLLASK(3)	kinase	kinase	146-137	0,37	0,29
6	FTEEQYLFEEELGKGAFSVVR(13)-DLINKMLTINPSK(5)	kinase	kinase	21-250	0,36	0,24
7	FTEEQYLFEEELGKGAFSVVR(13)-VLAGEYAAKIINTK(10)	kinase	kinase	21-42	0,33	0,24
8	MLTINPSKR(8)-GSGSGMTR(1)	kinase	kinase	258-1	0,33	0,20
9	NFSGGKSGGNK(6)-DHQKLER(4)	linker	kinase	317-56	0,31	0,27
10	DLINKMLTINPSK(5)-IINTKK(5)	kinase	kinase	250-47	0,30	0,19
11	ITAAEALKHPWISHR(8)-VLAGEYAAKIINTK(10)	kinase	kinase	267-42	0,30	0,25
12	FTEEQYLFEEELGKGAFSVVR(13)-MLTINPSKR(8)	kinase	kinase	21-258	0,30	0,24
13	VLAGEYAAKIINTK(10)-IINTKK(5)	kinase	kinase	42-47	0,29	0,23
14	FTEEQYLFEEELGKGAFSVVR(13)-LKGAAVK(2)	kinase	kinase	21-148	0,29	0,21
15	DHQKLER(4)-KQEIIK(1)	kinase	hub	56-347	0,28	0,15
16	LLKHPNIVR(3)-KQEIIK(1)	kinase	hub	68-347	0,28	0,12
17	FTEEQYLFEEELGKGAFSVVR(13)-DLKPENLLLASK(3)	kinase	kinase	21-137	0,27	0,23
18	AGAYDFPSPEWDTVTPEAKDLINK(19)-DHQKLER(4)	kinase	kinase	245-56	0,26	0,17
19	ESSESTNTTIEDETKVR(16)-DLKPENLLLASK(3)	hub	kinase	344-137	0,26	0,18
20	MLTINPSKR(8)-IINTKK(5)	kinase	kinase	258-47	0,25	0,18
21	FTEEQYLFEEELGKGAFSVVR(13)-DLKPENLLLASKLK(12)	kinase	kinase	21-146	0,25	0,15
22	AGAYDFPSPEWDTVTPEAKDLINK(19)-GSGSGMTR(1)	kinase	kinase	245-1	0,25	0,26
23	LKGAILTTLATR(2)-DHQKLER(4)	regulatory	kinase	300-56	0,25	0,16
24	VLAGEYAAKIINTK(10)-MLTINPSKR(8)	kinase	kinase	42-258	0,24	0,20
25	LYQIQKAGAYDFPSPEWDTVTPEAK(6)-VLAGEYAAKIINTK(10)	kinase	kinase	226-42	0,24	0,25
26	GSGSGMTR(1)-LKGAAVK(2)	kinase	kinase	1-148	0,24	0,25
27	AGAYDFPSPEWDTVTPEAKDLINK(19)-DLKPENLLLASK(3)	kinase	kinase	245-137	0,23	0,19
28	FTEEQYLFEEELGKGAFSVVR(13)-KSDGVK(1)	kinase	linker	21-323	0,23	0,20
29	FTEEQYLFEEELGKGAFSVVR(13)-LLKHPNIVR(3)	kinase	kinase	21-68	0,23	0,21
30	DLINKMLTINPSK(5)-LKGAAVK(2)	kinase	kinase	250-148	0,23	0,15
31	VLAGEYAAKIINTK(10)-LKGAAVK(2)	kinase	kinase	42-148	0,23	0,18
32	VLAGEYAAKIINTK(10)-NFSGGKSGGNK(6)	kinase	linker	42-317	0,23	0,14
33	VLAGEYAAKIINTK(10)-DLKPENLLLASK(3)	kinase	kinase	42-137	0,23	0,22
34	ITAAEALKHPWISHR(8)-IINTKK(5)	kinase	kinase	267-47	0,22	0,23
35	LYQIQKAGAYDFPSPEWDTVTPEAK(6)-DLKPENLLLASK(3)	kinase	kinase	226-137	0,22	0,17
36	DLINKMLTINPSK(5)-DLKPENLLLASK(3)	kinase	kinase	250-137	0,21	0,25
37	LKGAILTTLATR(2)-DLKPENLLLASK(3)	regulatory	kinase	300-137	0,21	0,19
38	AGAYDFPSPEWDTVTPEAKDLINK(19)-DLKPENLLLASKLK(12)	kinase	kinase	245-146	0,20	0,16
39	LYQIQKAGAYDFPSPEWDTVTPEAK(6)-DLKPENLLLASKLK(12)	kinase	kinase	226-146	0,19	0,15
40	LYQIQKAGAYDFPSPEWDTVTPEAK(6)-LKGAAVK(2)	kinase	kinase	226-148	0,19	0,12
41	LLKHPNIVR(3)-LKGAAVK(2)	kinase	kinase	68-148	0,18	0,20

42	VLAGQEYAAKIINTK(10)-LLKHPNIVR(3)	kinase	kinase	42-68	0,17	0,15
43	DLKPENLLASKLK(12)-MLTINPSKR(8)	kinase	kinase	146-258	0,16	0,16
44	VLAGQEYAAKIINTK(10)-KQEIK(1)	kinase	hub	42-347	0,16	0,15
45	DHQKLER(4)-KSDGVK(1)	kinase	linker	56-323	0,16	0,12
46	VLAGQEYAAKIINTK(10)-KSDGVK(1)	kinase	linker	42-323	0,14	0,15

Supplementary File 11

pT286 Heterotypic peptides (30 min)					
#	Peptides	domain_a	domain_b	link	R
1	QETVDCLKK(8)-LLKHPNIVR(3)	regulatory	kinase	291-68	0,15
2	LYQQIKAGAYDFPSPEWDTVPEAK(6)-QETVDCLKK(8)	kinase	regulatory	226-291	0,13
3	VLAGQEYAAKIINTK(10)-QETVDCLKK(8)	kinase	regulatory	42-291	0,10
4	DLKPENLLLASKLK(12)-QETVDCLKK(8)	kinase	regulatory	146-291	0,10
5	QETVDCLKK(8)-MLTINPSKR(8)	regulatory	kinase	291-258	0,07
6	DLINKMLTINPSK(5)-QETVDCLKK(8)	kinase	regulatory	250-291	0,05

pT286 Heterotypic peptides (150 min)

#	Peptides	domain_a	domain_b	crosslinked lysines	R
1	VLAGQEYAAKIINTK(10)-QETVDCLKK(8)	kinase	regulatory	42-291	0,39
2	QETVDCLKK(8)-LLKHPNIVR(3)	regulatory	kinase	291-68	0,35
3	QETVDCLKK(8)-DHQKLER(4)	regulatory	kinase	291-56	0,26
4	ITAAEALKHPWISHR(8)-QETVDCLKK(8)	kinase	regulatory	267-291	0,18
5	DLINKMLTINPSK(5)-QETVDCLKK(8)	kinase	regulatory	250-291	0,15
6	QETVDCLKK(8)-LKGAAVK(2)	regulatory	kinase	291-148	0,11