

SUPPLEMENTARY MATERIAL

Table S1. Raw binding data for 50 NF- κ B binding motif used in the study. Raw data and the geometric mean of two independent measurements. The data for p52p52 are from 8 gels, normalised by scaling the observed PhosphorImager signals by the signal of the control sequence GGGGTCCCC (assigned with the value of 1000). The data for p50p50 are experimental values from (4), normalised to the value 1000 for GGGGTCCCC motif.

sites	p52p52			p50p50		
	exp1	exp2	GM	exp1	exp2	GM
GGAAATTTCC	19	149	54	62	12	27
GGAACCTCCC	25	12	17	10	7	9
GGAACGCCCC	23	19	21	23	26	24
GGAACGTCCC	120	66	89	15	15	15
GGAACTTTCC	11	77	28	13	8	10
GGAAGCTTCC	12	13	13	13	10	12
GGAAGGCCCC	46	28	36	29	39	34
GGAAGGCTCC	5	6	5	10	4	7
GGAAGTTTCC	5	72	19	13	9	11
GGAATACCCC	418	374	396	150	261	198
GGAATATTCC	6	10	7	6	5	6
GGAATTCTCC	23	14	18	13	13	13
GGAGAACCCC	38	50	44	76	179	117
GGAGACTTCC	11	22	16	10	4	6
GGAGCGCCCC	129	154	141	17	35	24
GGAGGATCCC	12	5	8	21	16	18
GGAGGCCTCC	14	12	13	9	4	6
GGAGGCTCCC	12	46	24	9	6	7
GGAGGGTTCC	24	19	21	35	40	38
GGGAAATTCC	713	1168	912	1128	563	797
GGGAACCTCC	155	96	122	211	198	205
GGGAATTTCC	1419	502	844	1480	595	939
GGGACTCTCC	104	101	103	115	127	121
GGGAGACTCC	10	21	14	10	7	8
GGGAGCTCCC	14	32	21	20	25	22
GGGAGGCCCC	28	27	27	101	154	125
GGGAGTCTCC	13	26	18	22	10	15
GGGATACCCC	186	404	274	205	375	278
GGGATATCCC	138	288	199	155	221	185
GGGATCCTCC	13	9	10	11	11	11
GGGATCTCCC	180	535	310	380	659	501
GGGATGTCCC	185	484	299	281	202	238
GGGGAATCCC	2323	1926	2116	2828	1157	1809
GGGGACCCCC	141	342	220	261	234	247
GGGGACTTCC	1301	972	1125	859	465	632
GGGGAGCCCC	138	78	104	216	289	250
GGGGAGTCCC	357	627	473	654	285	432
GGGGATTCCC	2267	3786	2929	4405	1127	2229
GGGGCACCCC	20	30	24	110	168	136
GGGGCCCCCC	47	33	39	127	135	131
GGGGCTCCCC	84	196	128	174	263	214
GGGGCTTCCC	1059	1217	1135	1425	1053	1225
GGGGGATTCC	952	930	941	1291	708	956
GGGGGCCCCC	103	57	76	109	134	121
GGGGGCTCCC	68	46	56	307	459	375
GGGGGGCTCC	28	21	24	66	112	86
GGGGTACTCC	12	99	34	23	23	23
GGGGTATCCC	323	191	248	132	236	177
GGGGTGCTCC	14	140	43	14	30	21
GGGGTCCCC	1000	1000	1000	1000	1000	1000

Table S2. Predicted p52p52 binding affinity ranks for all 256 variants of the GRRNYYCC nucleotide sequence. Complementary sequences are assigned adjacent ranks that differ by 1/256.

sites	p52p52	sites	p52p52	sites	p52p52	sites	p52p52
GGAAAACCCC	0.9414	GGAGAACCCC	0.6211	GGGAAAACCCC	0.9219	GGGGAACCCC	0.8906
GGAAAATCCC	0.5781	GGAGAACTCC	0.375	GGGAAACTCC	0.582	GGGGAACTCC	0.707
GGAAAATCCC	0.7227	GGAGAATCCC	0.3984	GGGAAATCCC	0.8789	GGGGAATCCC	0.9883
GGAAAATCCC	0.4453	GGAGAATCCC	0.4414	GGGAAATCCC	0.9336	GGGGAATCCC	0.9609
GGAAACCCCC	0.8438	GGAGACCCCC	0.3555	GGGAACCCCC	0.7969	GGGGACCCCC	0.7422
GGAAACCTCC	0.1289	GGAGACCTCC	0.0469	GGGAACCTCC	0.2227	GGGGACCTCC	0.5195
GGAAACTCCC	0.4336	GGAGACTCCC	0.1211	GGGAACTCCC	0.6953	GGGGACTCCC	0.8242
GGAAACTTCC	0.2305	GGAGACTTCC	0.2539	GGGAACTTCC	0.7109	GGGGACTTCC	0.9141
GGAAAGCCCC	0.7773	GGAGAGCCCC	0.5273	GGGAAGCCCC	0.8516	GGGGAGCCCC	0.8203
GGAAAGCTCC	0.1484	GGAGAGCTCC	0.1719	GGGAAGCTCC	0.4141	GGGGAGCTCC	0.4883
GGAAAGTCCC	0.5469	GGAGAGTCCC	0.332	GGGAAGTCCC	0.8359	GGGGAGTCCC	0.9531
GGAAAGTTCC	0.2461	GGAGAGTTCC	0.2852	GGGAAGTTCC	0.6836	GGGGAGTTCC	0.8672
GGAAATCCCC	0.9805	GGAGATCCCC	0.6484	GGGAATCCCC	0.9961	GGGGATCCCC	0.8984
GGAAATCTCC	0.4727	GGAGATCTCC	0.2383	GGGAATCTCC	0.6602	GGGGATCTCC	0.6523
GGAAATTCCC	0.9297	GGAGATTCCC	0.6562	GGGAATTCCC	0.9648	GGGGATTCCC	0.9922
GGAAATTCCC	0.5312	GGAGATTCCC	0.4688	GGGAATTCCC	0.9258	GGGGATTCCC	0.9766
GGAACACCCC	0.7734	GGAGCACCCC	0.293	GGGACACCCC	0.7891	GGGGCACCCC	0.5586
GGAACACTCC	0.2656	GGAGCACTCC	0.1445	GGGCACTCC	0.3008	GGGGCACTCC	0.4648
GGAACATCCC	0.4805	GGAGCATCCC	0.1641	GGGACATCCC	0.6914	GGGGCATCCC	0.7266
GGAACATTCC	0.2109	GGAGCATTCC	0.1914	GGGACATTCC	0.6641	GGGGCATTCC	0.8555
GGAACCCCCC	0.6055	GGAGCCCCCC	0.1602	GGGACCCCCC	0.625	GGGGCCCCCC	0.3789
GGAACCTTCC	0.0742	GGAGCCCTCC	0.0273	GGGACCTTCC	0.0977	GGGGCCCTCC	0.3086
GGAACCTCCC	0.3242	GGAGCCTCCC	0.0898	GGGACCTCCC	0.5039	GGGGCCTCCC	0.4219
GGAACCTTCC	0.0664	GGAGCCTTCC	0.0078	GGGACCTTCC	0.4023	GGGGCCTTCC	0.5703
GGAACGCCCC	0.7617	GGAGCGCCCC	0.3164	GGGACGCCCC	0.7539	GGGGCGCCCC	0.5352
GGAACGCTCC	0.1836	GGAGCGCTCC	0.1172	GGGACGCTCC	0.2617	GGGGCGCTCC	0.3125
GGAACGTCCC	0.4531	GGAGCGTCCC	0.2578	GGGACGTCCC	0.6133	GGGGCGTCCC	0.75
GGAACGTCCC	0.2266	GGAGCGTCCC	0.1797	GGGACGTCCC	0.457	GGGGCGTCCC	0.7578
GGAATCCCCC	0.8711	GGAGTCCCCC	0.4844	GGGACTCCCC	0.9492	GGGGTCCCCC	0.8164
GGAATCTTCC	0.2812	GGAGTCTTCC	0.1758	GGGACTCTTCC	0.3281	GGGGTCTTCC	0.5234
GGAATTTCCC	0.6797	GGAGTTCCC	0.4102	GGGACTTTCC	0.832	GGGGTTCCC	0.8477
GGAATTTTCC	0.2422	GGAGTTTCC	0.1523	GGGACTTTCC	0.5508	GGGGTTTCC	0.7812
GGAAGACCCC	0.8125	GGAGGACCCC	0.2773	GGGAGACCCC	0.6328	GGGGGACCCC	0.5898
GGAAGACTCC	0.1055	GGAGGACTCC	0.0586	GGGAGACTCC	0.082	GGGGGACTCC	0.3906
GGAAGATCCC	0.3633	GGAGGATCCC	0.0352	GGGAGATCCC	0.6445	GGGGGATCCC	0.6719
GGAAGATTCC	0.1094	GGAGGATTCC	0.2031	GGGAGATTCC	0.5977	GGGGGATTCC	0.9062
GGAAGCCCCC	0.8047	GGAGGCCCCC	0.1953	GGGAGCCCCC	0.5078	GGGGGCCCCC	0.418
GGAAGCCTCC	0.043	GGAGGCCTCC	0	GGGAGCCTCC	0.0156	GGGGGCCTCC	0.1992
GGAAGCTCCC	0.3398	GGAGGCTCCC	0.0117	GGGAGCTCCC	0.5547	GGGGGCTCCC	0.5117
GGAAGCTTCC	0.0195	GGAGGCTTCC	0.0391	GGGAGCTTCC	0.3359	GGGGGCTTCC	0.8008
GGAAGCCCCC	0.5664	GGAGGGCCCC	0.3047	GGGAGGCCCC	0.4258	GGGGGGCCCC	0.3828
GGAAGCTTCC	0.0039	GGAGGGCTCC	0.0234	GGGAGGCTCC	0.0859	GGGGGGCTCC	0.1562
GGAAGTCCC	0.4062	GGAGGGTCCC	0.0938	GGGAGGTCCC	0.5	GGGGGGTCCC	0.6289
GGAAGTTCC	0.0625	GGAGGGTTCC	0.0703	GGGAGGTTCC	0.3203	GGGGGGTTCC	0.6094

GGAAGTCCC	0.9102	GGAGGTCCC	0.5156	GGGAGTCCC	0.8281	GGGGGTCCC	0.7461
GGAAGTCTCC	0.25	GGAGGTCTCC	0.0508	GGGAGTCTCC	0.125	GGGGGTCTCC	0.3516
GGAAGTTCCC	0.7148	GGAGGTTCCC	0.2188	GGGAGTTCCC	0.6992	GGGGGTCCC	0.793
GGAAGTTTCC	0.2344	GGAGGTTTCC	0.1328	GGGAGTTTCC	0.4297	GGGGGTTC	0.8398
GGAATACCCC	0.9727	GGAGTACCCC	0.5391	GGGATACCCC	0.8867	GGGGTACCCC	0.7656
GGAATACTCC	0.4961	GGAGTACTCC	0.3594	GGGATACTCC	0.3438	GGGGTACTCC	0.543
GGAATATCCC	0.7383	GGAGTATCCC	0.3477	GGGATATCCC	0.8633	GGGGTATCCC	0.8828
GGAATATTCC	0.1367	GGAGTATTCC	0.4922	GGGATATTCC	0.7344	GGGGTATTCC	0.9688
GGAATCCCC	0.9023	GGAGTCCCC	0.3867	GGGATCCCC	0.6758	GGGGTCCCC	0.5938
GGAATCCTCC	0.207	GGAGTCCTCC	0.0547	GGGATCCTCC	0.0312	GGGGTCCTCC	0.2734
GGAATCTCCC	0.6016	GGAGTCTCCC	0.0781	GGGATCTCCC	0.6406	GGGGTCTCCC	0.6367
GGAATCTTCC	0.1133	GGAGTCTTCC	0.1016	GGGATCTTCC	0.3672	GGGGTCTTCC	0.8086
GGAATGCCCC	0.8594	GGAGTGCCCC	0.4609	GGGATGCCCC	0.7305	GGGGTGCCCC	0.5625
GGAATGCTCC	0.1875	GGAGTGCTCC	0.1406	GGGATGCTCC	0.168	GGGGTGCTCC	0.2891
GGAATGTCCC	0.668	GGAGTGTCCC	0.2969	GGGATGTCCC	0.6875	GGGGTGTCCC	0.7852
GGAATGTTCC	0.2148	GGAGTGTTCC	0.2695	GGGATGTTCC	0.4766	GGGGTGTTCC	0.7695
GGAATTCCCC	0.957	GGAGTTCCCC	0.7031	GGGATTCCCC	0.9844	GGGGTTCCCC	0.8945
GGAATTCTCC	0.4375	GGAGTTCTCC	0.3711	GGGATTCTCC	0.3945	GGGGTTCTCC	0.6172
GGAATTCCC	0.9375	GGAGTTCCC	0.5859	GGGATTCCC	0.875	GGGGTTCCC	0.918
GGAATTTCC	0.4492	GGAGTTTCC	0.5742	GGGATTTCC	0.7188	GGGGTTTCC	0.9453