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SUPPLEMENTARY MATERIAL

Importance of CDK7 for G1 Re-Entry into the Mammalian Cell Cycle and Identification of New Downstream Networks Using a Computational Method

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Supplemental Table 1. Expression Values for Selected 39 Genes for G0-G1

Gene	Time After Serum Starvation (Hours)						
	0	**6**	**12**	**15**	**18**	**21**	**24**
Abl1	9	10	12	12	9	9	23
Ccna1	71	31	39	12	28	21	28
Ccna2	139	144	120	270	402	534	724
Ccnb2	91	44	12	12	9	171	91
Ccne1	137	131	361	637	819	631	606
Crkol	32	11	103	54	44	58	59
Csf1r	42	55	85	53	24	49	38
E2f5	80	35	87	80	68	71	100
Egfr	36	31	15	12	9	9	31
Elk1	14	11	171	227	78	85	187
Elk4	10	61	37	17	9	30	12
Ets1	13	55	38	42	48	19	25
Etv6	33	47	62	65	45	10	52
Fgf3	9	10	19	12	9	9	15
Figf	38	12	124	24	13	23	13
Fos	12	31	12	15	18	22	15
Fosb	13	52	38	13	10	10	13
Il1a	15	33	29	40	27	10	43
Lmyc1	30	46	12	12	67	39	15
Mybl2	102	130	239	302	389	319	405
Myc	142	366	372	430	257	299	251
Nmyc1	12	22	40	15	11	10	58
Nras	11	41	24	15	11	28	31

(Supplemental Table 1) contd…..

Gene	Time After Serum Starvation (Hours)						
	0	**6**	**12**	**15**	**18**	**21**	**24**
Pdgfb	71	52	77	62	19	43	69
Pgf	48	417	64	43	132	181	83
Ptn	446	265	131	223	196	107	124
Ret	50	65	12	36	34	12	14
Tfdp1	77	28	69	164	231	349	187
Tgfb2	84	101	132	26	37	36	46
Thra	79	83	176	168	39	43	118
Tlm	9	24	43	49	26	9	21
E2F1	70	70	72	120	88	100	99
Trp53	287	511	778	741	538	565	772
mdm2	193	88	98	145	167	207	168
Cdkn2a	9	10	12	12	9	9	15
Cdk7	140	88	102	111	98	111	96
Rbl1	19	11	44	102	109	100	110
Rbl2	76	11	16	20	11	30	35
Cdkn2d	11	11	16	15	58	29	74

Supplemental Table 2. Ratio of Expression Values from 0 Times for Selected 39 Genes for G0-G1

Gene	Time After Serum Starvation (Hours)					
	6	**12**	**15**	**18**	**21**	**24**
Abl1	1.11	1.33	1.33	1.00	1.00	2.56
Ccna1	0.44	0.55	0.17	0.39	0.30	0.39
Ccna2	1.04	0.86	1.94	2.89	3.84	5.21
Ccnb2	0.48	0.13	0.13	0.10	1.88	1.00
Ccne1	0.96	2.64	4.65	5.98	4.61	4.42
Crkol	0.34	3.22	1.69	1.38	1.81	1.84
Csf1r	1.31	2.02	1.26	0.57	1.17	0.90
E2f5	0.44	1.09	1.00	0.85	0.89	1.25
Egfr	0.86	0.42	0.33	0.25	0.25	0.86
Elk1	0.79	12.21	16.21	5.57	6.07	13.36
Elk4	6.10	3.70	1.70	0.90	3.00	1.20
Ets1	4.23	2.92	3.23	3.69	1.46	1.92
Etv6	1.42	1.88	1.97	1.36	0.30	1.58
Fgf3	1.11	2.11	1.33	1.00	1.00	1.67
Figf	0.32	3.26	0.63	0.34	0.61	0.34
Fos	2.58	1.00	1.25	1.50	1.83	1.25
Fosb	4.00	2.92	1.00	0.77	0.77	1.00
Il1a	2.20	1.93	2.67	1.80	0.67	2.87
Lmyc1	1.53	0.40	0.40	2.23	1.30	0.50
Mybl2	1.27	2.34	2.96	3.81	3.13	3.97

(Supplemental Table 2) contd…..

Gene	Time After Serum Starvation (Hours)					
	6	12	15	18	21	24
Myc	2.58	2.62	3.03	1.81	2.11	1.77
Nmyc1	1.83	3.33	1.25	0.92	0.83	4.83
Nras	3.73	2.18	1.36	1.00	2.55	2.82
Pdgfb	0.73	1.08	0.87	0.27	0.61	0.97
Pgf	8.69	1.33	0.90	2.75	3.77	1.73
Ptn	0.59	0.29	0.50	0.44	0.24	0.28
Ret	1.30	0.24	0.72	0.68	0.24	0.28
Tfdp1	0.36	0.90	2.13	3.00	4.53	2.43
Tgfb2	1.20	1.57	0.31	0.44	0.43	0.55
Thra	1.05	2.23	2.13	0.49	0.54	1.49
Tlm	2.67	4.78	5.44	2.89	1.00	2.33
E2F1	1.00	1.03	1.71	1.26	1.43	1.41
Trp53	1.78	2.71	2.58	1.87	1.97	2.69
mdm2	0.46	0.51	0.75	0.87	1.07	0.87
Cdkn2a	1.11	1.33	1.33	1.00	1.00	1.67
Cdk7	0.63	0.73	0.79	0.70	0.79	0.69
Rbl1	0.58	2.32	5.37	5.74	5.26	5.79
Rbl2	0.14	0.21	0.26	0.14	0.39	0.46
Cdkn2d	1.00	1.45	1.36	5.27	2.64	6.73

Supplemental Table 3. Expression Values for Selected 39 Genes for G1-G2

Gene	Time After the Hydroxyl Urea Treatment (Hours)						
	0	3	6	9	12	15	18
Abl1	12	10	9	13	12	15	11
Ccna1	48	39	30	13	42	27	34
Ccna2	488	467	510	447	301	333	526
Ccnb2	12	66	258	189	126	15	27
Ccne1	868	386	274	206	443	534	359
Crkol	67	94	42	95	39	75	36
Csf1r	50	58	85	49	51	91	57
E2f5	40	48	39	58	68	43	31
Egfr	12	10	9	13	12	15	11
Elk1	61	150	17	91	30	73	104
Elk4	11	10	9	38	30	40	10
Ets1	24	33	33	26	70	41	32
Etv6	19	16	30	48	40	49	48
Fgf3	16	10	9	13	12	15	11
Figf	38	17	9	14	11	10	32
Fos	45	57	17	32	77	48	24
Fosb	20	14	14	24	13	13	10

(Supplemental Table 3) contd…..

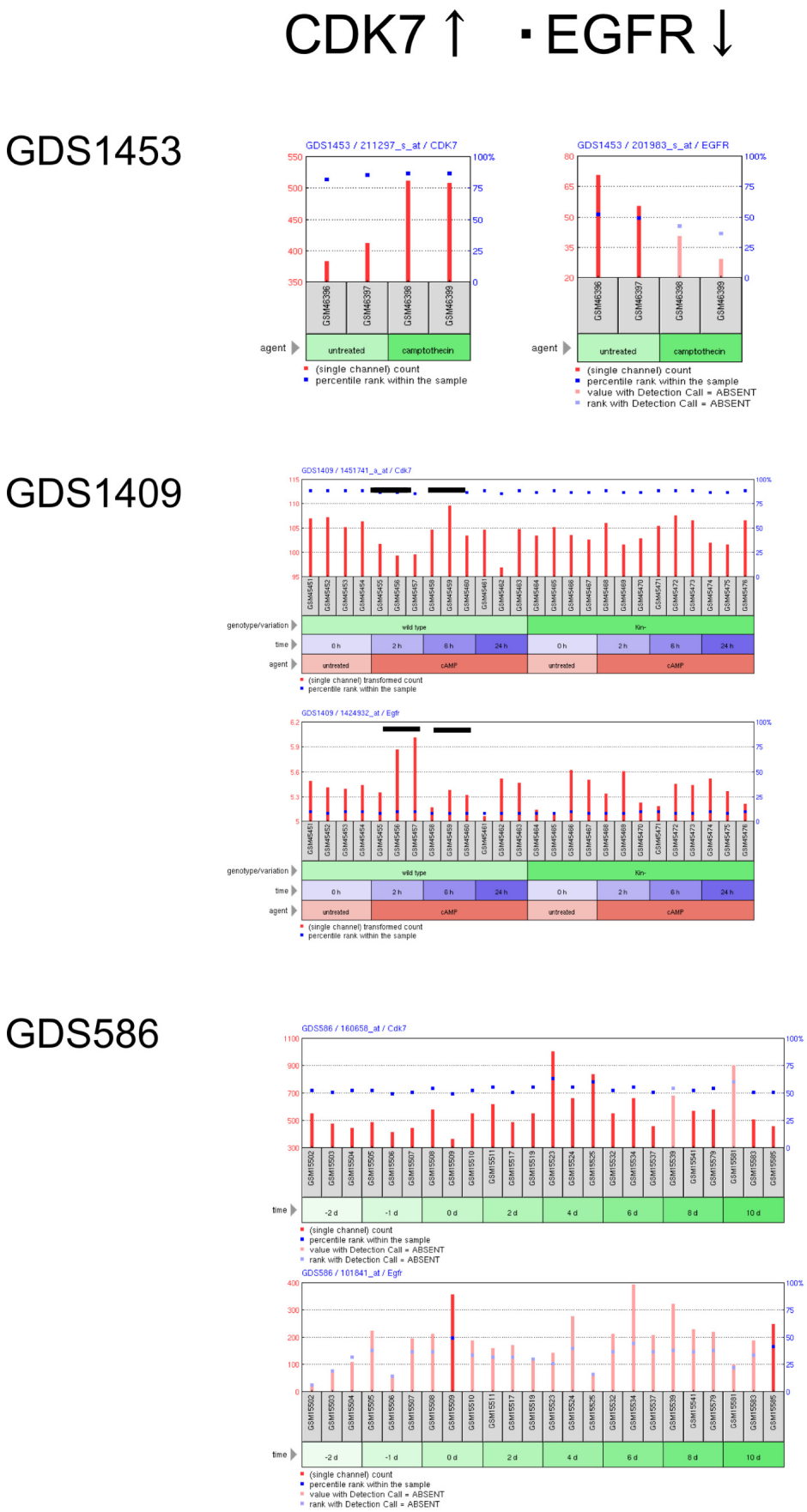
Gene	Time After the Hydroxyl Urea Treatment (Hours)						
	0	3	6	9	12	15	18
ll1a	44	42	21	23	52	23	35
Lmyc1	66	67	24	84	83	34	43
Mybl2	393	197	245	263	313	293	258
Myc	175	401	188	364	309	219	225
Nmyc1	21	13	13	18	54	23	24
Nras	22	13	11	15	18	16	12
Pdgfb	48	57	60	62	30	66	60
Pgf	46	322	234	197	22	15	11
Ptn	858	520	470	305	448	387	470
Ret	46	12	32	56	11	27	31
Tfdp1	241	249	161	176	233	170	184
Tgfb2	111	62	52	48	53	66	63
Thra	157	114	116	187	147	158	153
Tlm	12	21	26	16	45	63	48
E2F1	200	110	50	82	174	83	97
Trp53	557	483	455	666	660	627	581
mdm2	373	293	88	125	109	143	72
Cdkn2a	12	10	14	13	12	15	11
Cdk7	59	147	124	76	70	110	90
Rbl1	93	52	49	46	43	100	72
Rbl2	33	23	40	27	18	20	22
Cdkn2d	20	111	74	15	18	16	74

Supplemental Table 4. Ratio of Expression Values from 0 Times for Selected 39 Genes for G1-G2

Genes	Time After the Hydroxyl Urea Treatment (Hours)					
	3	6	9	12	15	18
Abl1	0.83	0.75	1.08	1.00	1.25	0.92
Ccna1	0.81	0.63	0.27	0.88	0.56	0.71
Ccna2	0.96	1.05	0.92	0.62	0.68	1.08
Ccnb2	5.50	21.50	15.75	10.50	1.25	2.25
Ccne1	0.44	0.32	0.24	0.51	0.62	0.41
Crkol	1.40	0.63	1.42	0.58	1.12	0.54
Csf1r	1.16	1.70	0.98	1.02	1.82	1.14
E2f5	1.20	0.98	1.45	1.70	1.08	0.78
Egfr	0.83	0.75	1.08	1.00	1.25	0.92
Elk1	2.46	0.28	1.49	0.49	1.20	1.70
Elk4	0.91	0.82	3.45	2.73	3.64	0.91
Ets1	1.38	1.38	1.08	2.92	1.71	1.33
Etv6	0.84	1.58	2.53	2.11	2.58	2.53
Fgf3	0.63	0.56	0.81	0.75	0.94	0.69

(Supplemental Table 4) contd…..

Genes	Time After the Hydroxyl Urea Treatment (Hours)					
	3	6	9	12	15	18
Figf	0.45	0.24	0.37	0.29	0.26	0.84
Fos	1.27	0.38	0.71	1.71	1.07	0.53
Fosb	0.70	0.70	1.20	0.65	0.65	0.50
ll1a	0.95	0.48	0.52	1.18	0.52	0.80
Lmyc1	1.02	0.36	1.27	1.26	0.52	0.65
Mybl2	0.50	0.62	0.67	0.80	0.75	0.66
Myc	2.29	1.07	2.08	1.77	1.25	1.29
Nmyc1	0.62	0.62	0.86	2.57	1.10	1.14
Nras	0.59	0.50	0.68	0.82	0.73	0.55
Pdgfb	1.19	1.25	1.29	0.63	1.38	1.25
Pgf	7.00	5.09	4.28	0.48	0.33	0.24
Ptn	0.61	0.55	0.36	0.52	0.45	0.55
Ret	0.26	0.70	1.22	0.24	0.59	0.67
Tfdp1	1.03	0.67	0.73	0.97	0.71	0.76
Tgfb2	0.56	0.47	0.43	0.48	0.59	0.57
Thra	0.73	0.74	1.19	0.94	1.01	0.97
Tlm	1.75	2.17	1.33	3.75	5.25	4.00
E2F1	0.55	0.25	0.41	0.87	0.42	0.49
Trp53	0.87	0.82	1.20	1.18	1.13	1.04
mdm2	0.79	0.24	0.34	0.29	0.38	0.19
Cdkn2a	0.83	1.17	1.08	1.00	1.25	0.92
Cdk7	2.49	2.10	1.29	1.19	1.86	1.53
Rbl1	0.56	0.53	0.49	0.46	1.08	0.77
Rbl2	0.70	1.21	0.82	0.55	0.61	0.67
Cdkn2d	5.55	3.70	0.75	0.90	0.80	3.70



Supplemental Figure. Gene expression profiles for *Cdk7* and *Egfr* extracted from the GEO (http://www.ncbi.nlm.nih.gov/sites/GDSbrowser) studies.