

# RealTime ready

## Human Cell Cycle Regulation Panel, 96

Panel of prevalidated qPCR assays for gene expression profiling of human genes involved in cell cycle regulation

**Cat. No. 05 339 359 001**

2 plates, each containing 96 assays

**Version November 2008**

△ Store at +2 to +8°C  
△ Store protected from light!

### Plate Layout

	1	2	3	4	5	6	7	8	9	10	11	12
<b>A</b>	1 ABL 1	2 ANAPC2	3 ANAPC4	4 ATM	5 ATR	6 BAX	7 BCCIP	8 BCL2	9 BIRC5	10 BRCA1	11 BRCA2	12 CCNA2
<b>B</b>	13 CCNB1	14 CCNB2	15 CCNC	16 CCND1	17 CCND2	18 CCND3	19 CCNE1	20 CCNE2	21 CCNF	22 CCNG1	23 CCNG2	24 CCNH
<b>C</b>	25 CCNT1	26 CCNT2	27 CDC14A	28 CDC16	29 CDC2	30 CDC20	31 CDC25A	32 CDC25B	33 CDC25C	34 CDC34	35 CDK2	36 CDK4
<b>D</b>	37 CDK5R1	38 CDK6	39 CDK7	40 CDK8	41 CDKN1A	42 CDKN1B	43 CDKN2A	44 CDKN2B	45 CDKN3	46 CHEK1	47 CHEK2	48 CKS1B
<b>E</b>	49 CKS2	50 CUL1	51 CUL2	52 CUL3	53 E2F1	54 E2F2	55 E2F3	56 E2F4	57 E2F5	58 E2F6	59 GADD45A	60 GTF2H1
<b>F</b>	61 GTSE1	62 JUN	63 KNTC1	64 KPNA2	65 LGALS3	66 MAD2L1	67 MAD2L2	68 MCM2	69 MCM3	70 MYC	71 PCNA	72 PLK1
<b>G</b>	73 RAD1	74 RAD17	75 RAD51	76 RAD9A	77 RB1	78 RBL1	79 RBL2	80 SKP2	81 TFDP1	82 TFDP2	83 TP53	84 WEE1
<b>H</b>	85 ACTB	86 B2M	87 GAPDH	88 HPRT1	89 RPL13A	90 18S	91 YWHAZ	92 RT+	93 RT+	94 RT+	95 RT-	96 RT-

H1 - H7: Reference genes  
 H8 - H10: RT positive control  
 H11 - H12: RT minus control

### Sample Details

No.	Pos.	HGNC-Symbol	Description
1	A 01	ABL 1	Proto-oncogene tyrosine-protein kinase ABL1
2	A 02	ANAPC2	Anaphase-promoting complex subunit 2 (APC2)
3	A 03	ANAPC4	Anaphase-promoting complex subunit 4 (APC4)
4	A 04	ATM	Serine-protein kinase ATM
5	A 05	ATR	Serine/threonine-protein kinase ATR
6	A 06	BAX	Apoptosis regulator BAX.
7	A 07	BCCIP	BRCA2 and CDKN1A-interacting protein (Protein TOK-1)
8	A 08	BCL2	Apoptosis regulator Bcl-2.
9	A 09	BIRC5	Baculoviral IAP repeat-containing protein 5 (Apoptosis inhibitor survivin)
10	A 10	BRCA1	Breast cancer type 1 susceptibility protein (RING finger protein 53)
11	A 11	BRCA2	Breast cancer type 2 susceptibility protein (Fanconi anemia group D1 protein)
12	A 12	CCNA2	Cyclin-A2 (Cyclin-A)
13	B 01	CCNB1	G2/mitotic-specific cyclin-B1.
14	B 02	CCNB2	G2/mitotic-specific cyclin-B2.
15	B 03	CCNC	Cyclin-C (hSRB11)
16	B 04	CCND1	G1/S-specific cyclin-D1 (PRAD1 oncogene)
17	B 05	CCND2	G1/S-specific cyclin-D2.
18	B 06	CCND3	G1/S-specific cyclin-D3.
19	B 07	CCNE1	G1/S-specific cyclin-E1.

No.	Pos.	HGNC-Symbol	Description
20	B 08	CCNE2	G1/S-specific cyclin-E2.
21	B 09	CCNF	G2/mitotic-specific cyclin-F.
22	B 10	CCNG1	Cyclin-G1 (Cyclin-G)
23	B 11	CCNG2	Cyclin-G2.
24	B 12	CCNH	Cyclin-H (MO15-associated protein)
25	C 01	CCNT1	Cyclin-T1 (CycT1)
26	C 02	CCNT2	Cyclin-T2 (CycT2)
27	C 03	CDC14A	Dual specificity protein phosphatase CDC14A
28	C 04	CDC16	Cell division cycle protein 16 homolog (CDC16Hs)
29	C 05	CDC2	Cell division control protein 2 homolog
30	C 06	CDC20	Cell division cycle protein 20 homolog (p55CDC)
31	C 07	CDC25A	M-phase inducer phosphatase 1
32	C 08	CDC25B	M-phase inducer phosphatase 2
33	C 09	CDC25C	M-phase inducer phosphatase 3
34	C 10	CDC34	Ubiquitin-conjugating enzyme E2 R1
35	C 11	CDK2	Cell division protein kinase 2
36	C 12	CDK4	Cell division protein kinase 4
37	D 01	CDK5R1	Cyclin-dependent kinase 5 activator 1 precursor (CDK5 activator 1)
38	D 02	CDK6	Cell division protein kinase 6
39	D 03	CDK7	Cell division protein kinase 7
40	D 04	CDK8	Cell division protein kinase 8

No.	Pos.	HGNC-Symbol	Description
41	D 05	CDKN1A	Cyclin-dependent kinase inhibitor 1 (p21)
42	D 06	CDKN1B	Cyclin-dependent kinase inhibitor 1B (Cyclin-dependent kinase inhibitor p27)
43	D 07	CDKN2A	Cyclin-dependent kinase inhibitor 2A, isoform 4 (p14ARF)
44	D 08	CDKN2B	Cyclin-dependent kinase 4 inhibitor B (p14-INK4b)
45	D 09	CDKN3	Cyclin-dependent kinase inhibitor 3
46	D 10	CHEK1	Serine/threonine-protein kinase Chk1
47	D 11	CHEK2	Serine/threonine-protein kinase Chk2
48	D 12	CKS1B	Cyclin-dependent kinases regulatory subunit 1 (CKS-1)
49	E 01	CKS2	Cyclin-dependent kinases regulatory subunit 2 (CKS-2)
50	E 02	CUL1	Cullin-1 (CUL-1)
51	E 03	CUL2	Cullin-2 (CUL-2)
52	E 04	CUL3	Cullin-3 (CUL-3)
53	E 05	E2F1	Transcription factor E2F1 (E2F-1)
54	E 06	E2F2	Transcription factor E2F2 (E2F-2)
55	E 07	E2F3	Transcription factor E2F3 (E2F-3)
56	E 08	E2F4	Transcription factor E2F4 (E2F-4)
57	E 09	E2F5	Transcription factor E2F5 (E2F-5)
58	E 10	E2F6	Transcription factor E2F6 (E2F-6)
59	E 11	GADD45A	Growth arrest and DNA-damage-inducible protein GADD45 alpha (DNA-damage-inducible transcript 1)
60	E 12	GTF2H1	General transcription factor IIH subunit 1 (General transcription factor IIH polypeptide 1)
61	F 01	GTSE1	G2 and S phase-expressed protein 1 (B99 homolog)
62	F 02	JUN	Transcription factor AP-1 (Activator protein 1)
63	F 03	KNTC1	Kinetochores-associated protein 1 (Rough deal homolog)
64	F 04	KPNA2	Importin subunit alpha-2 (Karyopherin subunit alpha-2)
65	F 05	LGALS3	Galectin-3 (Galactose-specific lectin 3)
66	F 06	MAD2L1	Mitotic spindle assembly checkpoint protein MAD2A (MAD2-like 1)
67	F 07	MAD2L2	Mitotic spindle assembly checkpoint protein MAD2B (MAD2-like 2)
68	F 08	MCM2	DNA replication licensing factor MCM2 (Minichromosome maintenance protein 2 homolog)
69	F 09	MCM3	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1)

No.	Pos.	HGNC-Symbol	Description
70	F 10	MYC	Myc proto-oncogene protein (c-Myc)
71	F 11	PCNA	Proliferating cell nuclear antigen (PCNA)
72	F 12	PLK1	Serine/threonine-protein kinase PLK1
73	G 01	RAD1	Cell cycle checkpoint protein RAD1
74	G 02	RAD17	Cell cycle checkpoint protein RAD17 (hRad17)
75	G 03	RAD51	DNA repair protein RAD51 homolog 1 (hRAD51)
76	G 04	RAD9A	Cell cycle checkpoint control protein RAD9A
77	G 05	RB1	Retinoblastoma-associated protein (pRb)
78	G 06	RBL1	Retinoblastoma-like protein 1 (107 kDa retinoblastoma-associated protein)
79	G 07	RBL2	Retinoblastoma-like protein 2 (130 kDa retinoblastoma-associated protein)
80	G 08	SKP2	S-phase kinase-associated protein 2 (F-box protein Skp2)
81	G 09	TFDP1	Transcription factor Dp-1 (E2F dimerization partner 1)
82	G 10	TFDP2	Transcription factor Dp-2 (E2F dimerization partner 2)
83	G 11	TP53	Cellular tumor antigen p53 (Tumor suppressor p53)
84	G 12	WEE1	Wee1-like protein kinase
85	H 01	ACTB	Reference Gene: Actin, cytoplasmic 1 (Beta-actin)
86	H 02	B2M	Reference Gene: Beta-2-microglobulin precursor
87	H 03	GAPDH	Reference Gene: Glyceraldehyde-3-phosphate dehydrogenase
88	H 04	HPRT1	Reference Gene: Hypoxanthine-guanine phosphoribosyltransferase
89	H 05	RPL13A	Reference Gene: 60S ribosomal protein L13a (23 kDa highly basic protein)
90	H 06	18S	Reference Gene: 18S ribosomal RNA
91	H 07	YWHAZ	Reference Gene: 14-3-3 protein zeta/delta (Protein kinase C inhibitor protein 1)
92	H 08		RT positive control 5'
93	H 09		RT positive control middle'
94	H 10		RT positive control 3'
95	H 11		RT minus control, cDNA
96	H 12		RT minus control, RNA

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