

EpiTect® ChIP qPCR Array

Mouse Cell Cycle

Cat. NO. 334211 GM-020A

For chromatin immunoprecipitation analysis

Format	For use with the following real-time cyclers
EpiTect ChIP qPCR Array Format A	Applied Biosystems® models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well block); Bio-Rad® models iCycler®, iQ™ 5, MyiQ™, MyiQ2; Bio-Rad/MJ Research Chromo4™; Eppendorf® MasterCycler® ep realplex models 2, 2s, 4, 4s; Stratagene® models Mx3005P®, Mx3000P®; Takara: TP-800
EpiTect ChIP qPCR Array Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
EpiTect ChIP qPCR Array Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
EpiTect ChIP qPCR Array Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
EpiTect ChIP qPCR Array Format F	Roche® LightCycler® 480 (96-well block)
EpiTect ChIP qPCR Array Format G	Roche: LightCycler 480 (384-well block)



Sample & Assay Technologies

Description

The Mouse Cell Cycle EpiTect ChIP qPCR Array profiles the histone modification status or “histone code” of 84 genes key to cell cycle regulation. Histone modifications regulate chromatin structure, genome integrity and transcriptional activity. Inappropriate increases or decreases in the expression of cell cycle regulators by epigenetic mechanisms contribute to oncogenesis and senescence. For example, histone methylation (H3K9) of the CDKN1A promoter causes transcriptional repression of this gene, leading to uncontrolled cell cycle progression. Epigenetic regulation of cell cycle gene expression also occurs during differentiation and development programs, from multipotent progenitor cells to terminally differentiated non-dividing cells. This array contains genes that positively and negatively regulate the cell cycle, its phase transitions and checkpoints, DNA replication and cell cycle arrest. Using chromatin immunoprecipitation and this qPCR Array, you can easily and reliably analyze the histone modification patterns associated with a focused gene panel involved in the cell cycle.

For further details, consult the *EpiTect ChIP qPCR Array Handbook*.

Shipping and storage

EpiTect ChIP qPCR Arrays are shipped at room temperature (15–25°C), on dry ice, or on blue ice depending on the destination and accompanying products. They should be stored at –20°C. Ensure that you have the correct EpiTect ChIP qPCR Array format for your instrument before starting the experiment.

Note: Open the package and store the products appropriately immediately on receipt.

Array layout

	1	2	3	4	5	6	7	8	9	10	11	12
A	3222402P14R ik	Abl1	Ak1	Apbb1	Atm	Brca1	Brca2	Camk2a	Casp3	Ccna1	Ccna2	Ccnb1
B	Ccnb2	Ccnc	Ccnd1	Ccne1	Ccnf	Cdc25a	Cdk2	Cdk4	Cdk5rap1	Cdkn1a	Cdkn1b	Cdkn2a
C	Chek1	Cks1b	Ddit3	Dnajc2	Dst	E2f1	E2f2	E2f3	E2f4	Gadd45a	Gpr132	Hus1
D	Inha	Itgb1	Macf1	Mad2l1	Mad2l1bp	Mcm2	Mcm3	Mcm4	Mdm2	Mki67	Mre11a	Msh2
E	Mtbp	Myb	Nek2	Nfatc1	Notch2	Npm2	Pcna	Pes1	Plkd1	Pmp22	Ppm1d	Ppp3ca
F	Prm1	Rad17	Rad21	Rad51	Rad9	Ran	Rbl1	Rbl2	Sesn2	Sfn	Shc1	Skp2
G	Slin1	Smc1a	Stag1	Sumo1	Taf10	Terf1	Tldp1	Tnfrsf5ip1	Trp53	Trp63	Tsg101	Wee1
H	Gapdh	Gapdh	Gapdh	Actb	Rpl30	Myod1	Serpina1a	IAP	Minor_sat	IGX1A	PPC	PPC

Gene table

Position	UniGene	GenBank	Gene Symbol	Description	Primer Catalog No.
A01			3222402P14 Rik		GPM1055076(+)01A
A02	Mm.1318	NM_009594	Abl1	C-abl oncogene 1, non-receptor tyrosine kinase	GPM1034439(+)01A
A03	Mm.480325	NM_021515	Ak1	Adenylate kinase 1	GPM1034457(+)01A
A04	Mm.38469	NM_009685	Apbb1	Amyloid beta (A4) precursor protein-binding, family B, member 1	GPM1053565(+)01A
A05	Mm.5088	NM_007499	Atm	Ataxia telangiectasia mutated homolog (human)	GPM1054827(+)01A
A06	Mm.244975	NM_009764	Brca1	Breast cancer 1	GPM1044092(+)01A
A07	Mm.236256	NM_009765	Brca2	Breast cancer 2	GPM1037690(+)01A
A08	Mm.131530	NM_177407	Camk2a	Calcium/calmodulin-dependent protein kinase II alpha	GPM1033710(+)01A
A09	Mm.34405	NM_009810	Casp3	Caspase 3	GPM1039894(+)01A
A10	Mm.4815	NM_007628	Ccna1	Cyclin A1	GPM1049644(+)01A
A11	Mm.4189	NM_009828	Ccna2	Cyclin A2	GPM1049586(+)01A
A12	Mm.260114	NM_172301	Ccnb1	Cyclin B1	GPM1045276(+)01A
B01	Mm.22592	NM_007630	Ccnb2	Cyclin B2	GPM1054946(+)01A
B02	Mm.278584	NM_016746	Ccnc	Cyclin C	GPM1036081(+)01A
B03	Mm.273049	NM_007631	Ccnd1	Cyclin D1	GPM1053924(+)01A
B04	Mm.16110	NM_007633	Ccne1	Cyclin E1	GPM1053092(+)01A
B05	Mm.77695	NM_007634	Ccnf	Cyclin F	GPM1047127(+)01A
B06	Mm.307103	NM_007658	Cdc25a	Cell division cycle 25 homolog A (S. pombe)	GPM1041032(+)01A
B07	Mm.111326	NM_016756	Cdk2	Cyclin-dependent kinase 2	GPM1043271(+)01A
B08	Mm.6839	NM_009870	Cdk4	Cyclin-dependent kinase 4	GPM1029124(+)01A
B09	Mm.289427	NM_025876	Cdk5rap1	CDK5 regulatory subunit associated protein 1	GPM1049296(+)01A
B10	Mm.195663	NM_007669	Cdkn1a	Cyclin-dependent kinase inhibitor 1A (P21)	GPM1033004(+)01A
B11	Mm.2958	NM_009875	Cdkn1b	Cyclin-dependent kinase inhibitor 1B	GPM1038346(+)01A
B12	Mm.4733	NM_009877	Cdkn2a	Cyclin-dependent kinase inhibitor 2A	GPM1050524(+)01A
C01	Mm.16753	NM_007691	Chek1	Checkpoint kinase 1 homolog (S. pombe)	GPM1054693(+)01A
C02	Mm.3049	NM_016904	Cks1b	CDC28 protein kinase 1b	GPM1049802(+)01A
C03	Mm.110220	NM_007837	Ddit3	DNA-damage inducible transcript 3	GPM1029128(+)01A
C04	Mm.266312	NM_009584	Dnajc2	DnaJ (Hsp40) homolog, subfamily C, member 2	GPM1051090(+)01A
C05	Mm.478284	NM_134448	Dst	Dystonin	GPM1027829(+)01A
C06	Mm.18036	NM_007891	E2f1	E2F transcription factor 1	GPM1049299(+)01A
C07	Mm.307932	NM_177733	E2f2	E2F transcription factor 2	GPM1036658(+)01A
C08	Mm.268356	NM_010093	E2f3	E2F transcription factor 3	GPM1044909(+)01A
C09	Mm.34554	NM_148952	E2f4	E2F transcription factor 4	GPM1040201(+)01A
C10	Mm.72235	NM_007836	Gadd45a	Growth arrest and DNA-damage-inducible 45 alpha	GPM1052080(+)01A
C11	Mm.20455	NM_019925	Gpr132	G protein-coupled receptor 132	GPM1044738(+)01A
C12	Mm.42201	NM_008316	Hus1	Hus1 homolog (S. pombe)	GPM1043382(+)01A
D01	Mm.1100	NM_010564	Inha	Inhibin alpha	GPM1028021(+)01A
D02	Mm.263396	NM_010578	Itgb1	Integrin beta 1 (fibronectin receptor beta)	GPM1040364(+)01A
D03	Mm.402299	NM_009600	Macf1	Microtubule-actin crosslinking factor 1	GPM1050718(+)01A
D04	Mm.485053	NM_019499	Mad2l1	MAD2 mitotic arrest deficient-like 1 (yeast)	GPM1037987(+)01A
D05	Mm.272024	NM_025649	Mad2l1bp	MAD2L1 binding protein	GPM1047412(+)01A
D06	Mm.16711	NM_008564	Mcm2	Minichromosome maintenance deficient 2 mitotin (S. cerevisiae)	GPM1052198(+)01A
D07	Mm.4502	NM_008563	Mcm3	Minichromosome maintenance deficient 3 (S. cerevisiae)	GPM1041976(+)01A
D08	Mm.1500	NM_008565	Mcm4	Minichromosome maintenance deficient 4 homolog (S. cerevisiae)	GPM1046589(+)01A

Position	UniGene	GenBank	Gene Symbol	Description	Primer Catalog No.
D09	Mm.22670	NM_010786	Mdm2	Transformed mouse 3T3 cell double minute 2	GPM1043184(+)01A
D10	Mm.4078	NM_001081117	Mki67	Antigen identified by monoclonal antibody Ki 67	GPM1053822(+)01A
D11	Mm.149071	NM_018736	Mre11a	Meiotic recombination 11 homolog A (S. cerevisiae)	GPM1040405(+)01A
D12	Mm.4619	NM_008628	Msh2	MutS homolog 2 (E. coli)	GPM1033391(+)01A
E01	Mm.390829	NM_134092	Mtbp	Mdm2, transformed 3T3 cell double minute p53 binding protein	GPM1031991(+)01A
E02	Mm.52109	NM_010848	Myb	Myeloblastosis oncogene	GPM1042753(+)01A
E03	Mm.33773	NM_010892	Nek2	NIMA (never in mitosis gene a)-related expressed kinase 2	GPM1028528(+)01A
E04	Mm.329560	NM_016791	Nfatc1	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 1	GPM1047917(+)01A
E05	Mm.254017	NM_010928	Notch2	Notch gene homolog 2 (Drosophila)	GPM1035782(+)01A
E06	Mm.347749	NM_181345	Npm2	Nucleophosmin/nucleoplasmin 2	GPM1045869(+)01A
E07	Mm.7141	NM_011045	Pcna	Proliferating cell nuclear antigen	GPM1049193(+)01A
E08	Mm.28659	NM_022889	Pes1	Pescadillo homolog 1, containing BRCT domain (zebrafish)	GPM1029214(+)01A
E09	Mm.290442	NM_013630	Pkd1	Polycystic kidney disease 1 homolog	GPM1032915(+)01A
E10	Mm.1237	NM_008885	Pmp22	Peripheral myelin protein 22	GPM1029532(+)01A
E11	Mm.45609	NM_016910	Ppm1d	Protein phosphatase 1D magnesium-dependent, delta isoform	GPM1029776(+)01A
E12	Mm.331389	NM_008913	Ppp3ca	Protein phosphatase 3, catalytic subunit, alpha isoform	GPM1035945(+)01A
F01	Mm.42733	NM_013637	Prm1	Protamine 1	GPM1046567(+)01A
F02	Mm.248489	NM_011233	Rad17	RAD17 homolog (S. pombe)	GPM1045272(+)01A
F03	Mm.182628	NM_009009	Rad21	RAD21 homolog (S. pombe)	GPM1046092(+)01A
F04	Mm.471596	NM_011234	Rad51	RAD51 homolog (S. cerevisiae)	GPM1034879(+)01A
F05	Mm.277629	NM_011237	Rad9	RAD9 homolog (S. pombe)	GPM1047958(+)01A
F06	Mm.297440	NM_009391	Ran	RAN, member RAS oncogene family	GPM1037507(+)01A
F07	Mm.244671	NM_011249	Rbl1	Retinoblastoma-like 1 (p107)	GPM1049328(+)01A
F08	Mm.235580	NM_011250	Rbl2	Retinoblastoma-like 2	GPM1040120(+)01A
F09	Mm.23608	NM_144907	Sesn2	Sestrin 2	GPM1050797(+)01A
F10	Mm.44482	NM_018754	Sfn	Stratifin	GPM1050811(+)01A
F11	Mm.86595	NM_011368	Shc1	Src homology 2 domain-containing transforming protein C1	GPM1035632(+)01A
F12	Mm.35584	NM_013787	Skp2	S-phase kinase-associated protein 2 (p45)	GPM1046007(+)01A
G01	Mm.10948	NM_011407	Slfn1	Schlafen 1	GPM1029753(+)01A
G02	Mm.482095	NM_019710	Smc1a	Structural maintenance of chromosomes 1A	GPM1041846(+)01A
G03	Mm.42135	NM_009282	Stag1	Stromal antigen 1	GPM1040942(+)01A
G04	Mm.362118	NM_009460	Sumo1	SMT3 suppressor of mif two 3 homolog 1 (yeast)	GPM1042123(+)01A
G05	Mm.285771	NM_020024	Taf10	TAF10 RNA polymerase II, TATA box binding protein (TBP)-associated factor	GPM1053571(+)01A
G06	Mm.4306	NM_009352	Terf1	Telomeric repeat binding factor 1	GPM1027782(+)01A
G07	Mm.925	NM_009361	Tfdp1	Transcription factor Dp 1	GPM1039712(+)01A
G08			Tnfrsf5ip1		GPM1033740(+)01A
G09	Mm.222	NM_011640	Trp53	Transformation related protein 53	GPM1029576(+)01A
G10	Mm.20894	NM_011641	Trp63	Transformation related protein 63	GPM1032468(+)01A
G11	Mm.241334	NM_021884	Tsg101	Tumor susceptibility gene 101	GPM1053214(+)01A
G12	Mm.287173	NM_009516	Wee1	WEE 1 homolog 1 (S. pombe)	GPM1039382(+)01A
H01	Mm.343110	NM_008084	Gapdh	Glyceraldehyde-3-phosphate dehydrogenase	GPM1052368(-)03A
H02	Mm.343110	NM_008084	Gapdh	Glyceraldehyde-3-phosphate dehydrogenase	GPM1052368(+)01A
H03	Mm.343110	NM_008084	Gapdh	Glyceraldehyde-3-phosphate dehydrogenase	GPM1052368(+)04A
H04	Mm.328431	NM_007393	Actb	Actin, beta	GPM1051747(+)01A
H05	Mm.358632	NM_009083	Rpl30	Ribosomal protein L30	GPM1046052(+)01A
H06	Mm.1526	NM_010866	Myod1	Myogenic differentiation 1	GPM1039033(+)01A
H07	Mm.439692	NM_009243	Serpina1a	Serine (or cysteine) peptidase inhibitor, clade A, member 1a	GPM1044680(+)01A
H08			IAP		GPM100002C(+)01A
H09			Minor_sat		GPM100003C(+)01A
H10			IGX1A		GPM100001C(-)01A
H11			PPC		GPX1900002(-)01A
H12			PPC		GPX1900002(-)01A

EpiTect ChIP qPCR Array products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

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