

Oligo GEArray® Human Cell Cycle Microarray

HybTube Format Cat. No. OHS-020
HybPlate Format Cat. No. EHS-020

Description

The Oligo GEArray® Human Cell Cycle Microarray profiles the expression of 112 genes key to cell cycle regulation. This array represents cyclin-dependent kinases (CDKs) involved in cell cycle progression and the proteins that regulate them. Cyclins, CDK inhibitors, CDK phosphatases, and CDK kinases are included. Also represented are genes essential for the DNA damage and mitotic spindle checkpoints and genes in the SCF and APC ubiquitin-conjugation complexes. Through a simple side-by-side hybridization experiment you can determine differential gene expression between your samples.

Functional Gene Groupings

G1 Phase and G1/S Transition: ANAPC2, CCND1 (cyclin D1), CCNE1 (cyclin E1), CDC7, CDC34, CDK4, CDK6, CDKN1B (p27), CDKN1C (p57), CDKN3, CUL1, CUL2, CUL3, CUL4A, CUL5, E2F1, SKP2.

S Phase and DNA Replication; ABL1 (C-ABL), MCM2, MCM3, MCM4 (CDC21), MCM5 (CDC46), MCM6 (Mis5), MCM7 (CDC47), PCNA, RPA3, SUMO1, UBE1.

G2 Phase and G2/M Transition: ANAPC2, ANAPC4, ANAPC5, ARHI, BCCIP, BIRC5, CCNA1 (cyclin A1), CCNB1 (cyclin B1), CCNG1 (cyclin G1), CCNH, CCNT1, CCNT2, CDC25A, CDC25C, CDC37, CDK5R1, CDK5R2, CDK5RAP1, CDK5RAP3, CDK2, CDK7, CDKN3, CKS1B, CKS2, DDX11, DNMT2, GTF2H1, GTSE1, HERC5, KPNA2, MNAT1, PKMYT1, RGC32, SERTAD1.

M Phase: CCNB2 (cyclin B2), CCNF, CDC2 (CDK1), CDC16, CDC20 (p55cdc), CDC25A, CDC25C, MRE11A, RAD50, RAD51.

Cell Cycle Checkpoint and Cell Cycle Arrest: ATM, ATR, BRCA1, BRCA2, CCNA2 (cyclin A2), CCNE2 (cyclin E2), CCNG2 (cyclin G2), CDC2 (CDK1), CDC25A, CDC34, CDC45L, CDC6, CDK2, CDKN1A (p21), CDKN1B (p27), CDKN1C (p57), CDKN2A (p16), CDKN2B (p15), CDKN2C (p18), CDKN2D (p19), CDKN3, CHEK1 (CHK1), CHEK2 (CHK2 / RAD53), CUL1, CUL2, CUL3, CUL4A, CUL5, GADD45A, HUS1, KNTC1, MAD2L1, MAD2L2, NBS1 (NIBRIN), RAD1, RAD17, RAD9A, RB1, RBBP8, TP53 (p53).

Regulation of the Cell Cycle: ABL1 (C-ABL), ANAPC2, ANAPC4, ANAPC5, ARHI, ATM, ATR, BCCIP, BCL2, BRCA2, CCNA1 (cyclin A1), CCNA2 (cyclin A2), CCNB1 (cyclin B1), CCNB2 (cyclin B2), CCNC (cyclin C), CCND1 (cyclin D1), CCND2 (cyclin D2), CCND3 (cyclin D3), CCNE1 (cyclin E1), CCNE2 (cyclin E2), CCNF (cyclin F), CCNH (cyclin H), CCNT1, CCNT2, CDC16, CDC2 (CDK1), CDC20 (p55cdc), CDC25A, CDC25C, CDC37, CDC45L, CDC6, CDK2, CDK4, CDK5R1, CDK5R2, CDK6, CDK7, CDK8, CDKN1A (p21), CDKN1B (p27), CKS1B, CUL5, DDX11, E2F1, E2F2, E2F3, E2F4, E2F5, E2F6, GADD45A, KNTC1, MKI67 (Ki67), PCNA, PKMYT1, RAD9A, RB1, SKP2, TFDP1 (DP1), TFDP2 (DP2).

Negative Regulation of the Cell Cycle: ATM, BAX, BRCA1, CDC7, CDKN2B (p15), CDKN2D (p19), RBL1 (p107 RB), RBL2 (p130 RB), TP53 (p53).

Storage Conditions

Please check the kit components immediately after you receive this package. SuperArray is only responsible for missing items reported within two (2) business days of receipt.

GEArray microarrays are shipped at ambient temperature enclosed in either a HybTube or ExpressPak Storage Box. They should be stored at -20°C upon receipt.

References

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10. Sherr C. J. and Weber J. D. (2000) The ARF/p53 Pathway. *Curr Opin Genet. Dev* **10**: 94-99.