

OMM-033

Oligo GEArray® Mouse Cancer PathwayFinder Microarray

Description

The Oligo GEArray® Mouse Cancer PathwayFinder Microarray is designed to rapidly assess the status of six different biological pathways frequently altered during or affected by transformation and tumorigenesis. Deregulation of these biological pathways promotes tumorigenesis by allowing the cells to grow and divide unchecked, to avoid apoptosis (programmed cell death), to respond abnormally to growth factors, to receive blood supply (angiogenesis), and to migrate from one location to another (metastasis and invasiveness). The array includes representative genes from each of these pathways (See the list below.) and can help you examine how a cell line has become immortalized or understand the progression of a particular cancer or model system.

Functional Gene Groupings (more detailed information is provided in the gene table)

Cell cycle control & DNA Damage Repair:

Atm, Brca1, Brca2, Ccnd1, Ccne1, Cdc25a, Cdk2, Cdk4, Cdkn1a (p21Waf1), Cdkn1b (p27Kip1), Cdkn2a (p16Ink4), Chek2 (Rad53), E2f1, Mdm2, Prkdc, Pten, Rb1, Trp53.

Apoptosis and Cell Senescence:

Apaf1, Bad, Bak1, Bax, Bcl2, Bcl2l1 (bcl-X), Birc5 (survivin), Casp8, Casp9, Cflar, Gzma, Tert (telomerase), Tnfrsf1a, Tnfrsf6 (Fas), Tnfrsf10b (DR5), Tnfrsf25 (DR3).

Signal Transduction Molecules and Transcription Factors:

Akt1, Akt2, Catnb, Erbb2, Ets2, Fos, Grb2, Jun, Map2k1 (MEK), Mapk14 (p38 MAPK), Myc, Nfkb1, Nfkbia (IkBa), Pik3c2a, Pik3cb, Pik3r1, Raf1, Rasa1, Src.

Adhesion:

Cd44, Cdh1, Icam1, Itga2, Itga3, Itga4, Itga5, Itga6, Itgav, Itgb1, Itgb3, Itgb5, Mcam, Mtss1, Ncam1.

Angiogenesis:

Angpt1, Bai1, Col18a1 (endostatin), Egf, Egfr, Fgf1, Fgf2, Fgfr2, Figf, Flt1, Hgf, Ifna1, Ifnb1, Igf1, Pdgfa, Pdgfb, Tek, Tgfb1, Tgfb1 (ALK-5), Thbs1, Thbs2, Tnf, Vegfa, Vegfb, Vegfc.

Invasion and metastasis:

Kai1, Kiss1, Met, Mmp2, Mmp9, Mta1, Mta2, Muc1, Nme4 (Nm23), Plau (uPA), Plaur (uPAR), S100a4, Serpine1 (PAI1), Serpinb2, Serpinb5 (maspin), Spp1 (osteopontin), Syk, Timp1, Timp3, Twist1.

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.

Oligo GEArrays are shipped at ambient temperature. They should be stored in the enclosed disposable hybridization tube at -20°C upon receipt.

References

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2. Tsatsanis, C. and Spandidos, D.A. (2000) The Role Of Oncogenic Kinases In Human Cancer. *Int J Mol Med* **5**: 583-590.
3. Meyer, T. and Hart, I.R. (1998) Mechanisms Of Tumour Metastasis. *Eur J Cancer* **34**: 214-221.
4. Detmar, M. (2000) Tumor Angiogenesis. *JID Symposium Proceedings* **5**: 20-23.
5. Klingelhutz, A.J. (1999) The Roles Of Telomeres And Telomerase In Cellular Immortalization And The Development Of Cancer. *Anticancer Res* **19**: 4823-4830.
6. Kaufmann, S.H. and Gores, G.J. (2000) Apoptosis In Cancer: Cause And Cure. *BioEssays* **22**: 1007-1017.
7. Lowe, S.W. and Lin, A.W. (2000) Apoptosis In Cancer. *Carcinogenesis* **21**: 485-495.
8. Funk, J.O. (1999) Cancer Cell Cycle Control. *Anticancer Res* **19**: 4772-4780.
9. Molinari, M. (2000) Cell Cycle Checkpoints And Their Inactivation In Human Cancer. *Cell Prolif* **33**: 261-274.
10. Clezardin, P. (1998) Recent Insights Into The Role Of Integrins In Cancer Metastasis. *Cell Mol Life Sci* **54**: 541-548.