

Oligo GEMArray[®] DNA Microarray: Mouse Apoptosis

Catalog Number

OMM-012
EMM-012

Format:

HybTube (Standard protocol)
HybPlate (Higher throughput protocol)

Description

The Oligo GEMArray[®] Mouse Apoptosis Microarray profiles the expression of 112 genes involved in apoptosis. This array includes TNF ligands and their receptors, members of the bcl-2 gene family and caspases. Also represented are members of the IAP, TRAF, CARD, and death domain gene families. Death effector domain family members, CIDE domain family members, and genes involved in the p53 and DNA damage response pathways are included. The array also represents genes involved in anti-apoptosis. Through a simple side-by-side hybridization experiment you can determine differential gene expression between your samples.

Functional Gene Groupings

TNF Ligand Family: Tnf, Tnfsf10, Tnfsf12, Tnfsf14, Tnfsf5, Tnfsf6, Tnfsf7.

TNF Receptor Family: Ltbr, Tnfrsf10b, Tnfrsf11b, Tnfrsf12a, Tnfrsf14, Tnfrsf1a, Tnfrsf21, Tnfrsf22, Tnfrsf5, Tnfrsf6.

Bcl-2 Family: Bad, Bag1, Bag3, Bag4, Bak1, Bax, Bcl2, Bcl2l1, Bcl2l2, Bcl2l10, Bcl2l11, Bcl2l13, Bcl2l14, Bid, Bnip2, Bnip3, Bnip3l, Bok, Mcl1.

Caspase Family: Casp1, Casp2, Casp3, Casp4, Casp6, Casp7, Casp8, Casp8ap2, Casp9, Casp12, Casp14.

IAP Family: Birc1a, Birc1b, Birc1e, Birc1f, Birc2, Birc3, Birc4, Birc5, Birc6.

TRAF Family: Traf1, Traf2, Traf3, Traf4, Traf5.

CARD Family: Apaf1, Asc, Bcl10, Birc3, Birc4, Card4, Card6, Card10, Card11, Card14, Card15, Casp1, Casp2, Casp4, Casp9, Cradd, Nol3, Ripk1, Ripk2, Ripk3.

Death Domain Family: Cradd, Dapk1, Dapk2, Fadd, Ripk1, Tnfrsf10b, Tnfrsf11b, Tnfrsf1a, Tnfrsf21, Tnfrsf6.

Death Effector Domain Family: Casp8, Cflar, Fadd.

CIDE Domain Family: Cidea, Cideb, Dffa, Dffb.

p53 and DNA Damage-Induced Apoptosis: Akt1, Apaf1, Bad, Bax, Bcl2, Bcl2l1, Bid, Casp3, Casp6, Casp7, Casp9, Trp53, Trp53bp2, Trp53inp1, Trp63, Trp73.

Anti-Apoptosis: Akt1, Als2cr2, Api5, Atf5, Aven, Bag1, Bag3, Bag4, Bcl2, Bcl2l1, Bcl2l10, Bcl2l2, Birc1a, Birc1b, Birc1e, Birc1f, Birc2, Birc3, Birc4, Birc5, Birc6, Bnip2, Bnip3, Casp2, Cflar, Dad1, Dsip1, Faim, Hells, Il10, Il31ra, Lhx4, Mapk8ip, Mcl1, Nfkb1, Nipa, Nme5, Pak7, Pim2, Polb, Prdx2, Prlr, Prok2, Rnf7, Sphk2, Tnf, Tnfrsf6, Tnfsf5.

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.

GEMArray 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

1. Green, DR. (2000) Apoptotic Pathways: Paper Wraps Stone Blunts Scissors. *Cell* **102**: 1-4.
2. Salvesen GS, Dixit VM. (1999) Caspase Activation: The Induced-Proximity Model. *PNAS* **96**: 10964-7.
3. Nagata S (1999) Fas Ligand-Induced Apoptosis. *Annu Rev Genet* **33**: 29-55.
4. Budihardjo I, Oliver H, Lutter M, Luo X, Wang X. (1999) Biochemical Pathways Of Caspase Activation During Apoptosis. *Annu Rev Cell Dev Biol* **15**: 269-90.
5. Ekert PG, Silke J, Vaux DL (1999) Caspase Inhibitors. *Cell Death Differ* **6**(11): 1081-6.
6. Lutz RJ (2000) Role Of The BH3 (Bcl-2 Homology 3) Domain In The Regulation Of Apoptosis And Bcl-2-Related Proteins. *Biochem Soc Trans* **28** (2): 51-6.
7. Inoue Ji, Ishida T, Tsukamoto N, Kobayashi N, Naito A, Azuma S, Yamamoto T. (2000) Tumor Necrosis Factor Receptor-Associated Factor (TRAF) Family: Adapter Proteins That Mediate Cytokine Signaling. *Exp Cell Res* **254**(1): 14-24.
8. Deveraux QL, Stennicke HR, Salvesen GS, Reed JC (1999) Endogenous Inhibitors Of Caspases. *J Clin Immunol* **19**(6): 388-98.
9. Orlinick JR, Chao MV. (1998) TNF-Related Ligands And Their Receptors. *Cell Signal* **10**(8): 543-51.
10. Schulze-Osthoff K, Ferrari D, Los M, Wesselborg S, Peter ME (1998) Apoptosis Signaling By Death Receptors. *Eur J Biochem* **254**(3): 439-59.
11. Singh A, Ni J, Aggarwal BB (1998) Death Domain Receptors And Their Role In Cell Demise. *J Interferon Cytokine Res* **18**(7): 439-50.

Product Specification Sheet

Position	UniGene	GenBank	Symbol	Description	Gene Name
49	Mm.1569	NM_007609	Casp11	Caspase 11, apoptosis-related cysteine peptidase	Casp4/Caspase-11
50	Mm.281379	NM_009811	Casp6	Caspase 6	Mch2/mcCASP-6
51	Mm.35687	NM_007611	Casp7	Caspase 7	A1314680/CMH-1
52	Mm.336851	NM_009812	Casp8	Caspase 8	Caspase-8/FLICE
53	Mm.22216	NM_010286	Tsc22d3	TSC22 domain family 3	DIP/Dsip1
54	Mm.22279	NM_011997	Casp8ap2	Caspase 8 associated protein 2	D4Erted659e/FLASH
55	Mm.88829	NM_015733	Casp9	Caspase 9	A1115399/AW493809
56	Mm.11778	NM_009805	Cflar	CASP8 and FADD-like apoptosis regulator	CLARP/Cash
57	Mm.10737	NM_009894	Cideb	Cell death-inducing DNA fragmentation factor, alpha subunit-like effector B	1110030C18Rik
58	Mm.218009	NM_009950	Cradd	CASP2 and RIPK1 domain containing adaptor with death domain	RAIDD
59	Mm.319038	NM_010015	Dad1	Defender against cell death 1	A1323713
60	Mm.24103	NM_029653	Dapk1	Death associated protein kinase 1	2310039H24Rik
61	Mm.42228	NM_011617	Tnfsf7	Tumor necrosis factor (ligand) superfamily, member 7	CD27LG/Cd27I
62	Mm.335252	NM_010019	Dapk2	Death-associated kinase 2	DAFK2
63	Mm.41433	NM_010044	Dffa	DNA fragmentation factor, alpha subunit	DFF35
64	Mm.86386	NM_007859	Dffb	DNA fragmentation factor, beta subunit	5730477D02Rik
65	Mm.5126	NM_010175	Fadd	Fas (TNFRSF6)-associated via death domain	Mort1/FADD
66	Mm.74605	NM_011810	Faim	Fas apoptotic inhibitory molecule	Faim-L/Faim-S
67	Mm.57223	NM_008234	Hells	Helicase, lymphoid specific	A1323785
68	Mm.874	NM_010548	Il10	Interleukin 10	CSIF/IL-10
69	Mm.229334	NM_139299	Il31ra	Interleukin 31 receptor A	CRL3/GLM-R
70	Mm.103624	NM_010712	Lhx4	LIM homeobox protein 4	Gsh-4/Gsh4
71	Mm.3122	NM_010736	Ltbr	Lymphotoxin B receptor	A1256028/CD18
72	Mm.2720	NM_011162	Mapk8ip1	Mitogen activated protein kinase 8 interacting protein 1	IB1/JIP-1
73	Mm.1639	NM_008562	Mcl1	Myeloid cell leukemia sequence 1	AW556805
74	Mm.256765	NM_008689	Nkx1	Nuclear factor of kappa light chain gene enhancer in B-cells 1, p105	NF-KB1/NF-kappaB
75	Mm.29780	NM_172735	Zc3hc1	Zinc finger, C3HC type 1	AU018540
76	Mm.275430	NM_080637	Nme5	Expressed in non-metastatic cells 5	1700019D05Rik
77	Mm.204876	NM_030152	Nol3	Nucleolar protein 3 (apoptosis repressor with CARD domain)	ARC/B430311C09Rik
78	Mm.131572	NM_172858	Pak7	P21 (CDKN1A)-activated kinase 7	2900083L08Rik
79	Mm.347478	NM_145737	Pim2	Proviral integration site 2	DXCch3/Pim-2
80	Mm.123211	NM_011130	Polb	Polymerase (DNA directed), beta	POLB
81	Mm.347009	NM_011563	Prdx2	Peroxiredoxin 2	AL022839/Band-8
82	Mm.10516	NM_011169	Prlr	Prolactin receptor	A1987712/Pr-1
83	Mm.87365	NM_015768	Prok2	Prokineticin 2	Bv8/PK2
84	Mm.374799	NM_009068	Ripk1	Receptor (TNFRSF)-interacting serine-threonine kinase 1	D330015H01Rik/RIP
85	Mm.112765	NM_138952	Ripk2	Receptor (TNFRSF)-interacting serine-threonine kinase 2	CARD3/CARDIAK
86	Mm.46612	NM_019955	Ripk3	Receptor-interacting serine-threonine kinase 3	AW107945
87	Mm.28235	XM_135065	Rnf7	Ring finger protein 7	Rbx2/SAG
88	Mm.24222	NM_020011	Sphk2	Sphingosine kinase 2	C76851
89	Mm.1293	NM_013693	Tnf	Tumor necrosis factor	DIF/TNF-alpha
90	Mm.193430	NM_020275	Tnfrsf10b	Tumor necrosis factor receptor superfamily, member 10b	DR5/KILLER
91	Mm.15383	NM_008764	Tnfrsf11b	Tumor necrosis factor receptor superfamily, member 11b (osteoprotegerin)	OCIF/OpG
92	Mm.28518	NM_013749	Tnfrsf12a	Tumor necrosis factor receptor superfamily, member 12a	A1255180/C87282
93	Mm.215147	NM_178931	Tnfrsf14	Tumor necrosis factor receptor superfamily, member 14 (herpesvirus entry mediator)	Atar/IvxA
94	Mm.1258	NM_011609	Tnfrsf1a	Tumor necrosis factor receptor superfamily, member 1a	CD120a/PPF
95	Mm.200792	NM_178589	Tnfrsf21	Tumor necrosis factor receptor superfamily, member 21	AA95987/DR6
96	Mm.261384	NM_023680	Tnfrsf22	Tumor necrosis factor receptor superfamily, member 22	C130035G06Rik
97	Mm.271833	NM_011611	Cd40	CD40 antigen	A1326936/Bp50
98	Mm.1626	NM_007987	Fas	Fas (TNF receptor superfamily member)	A1196731/APO-1
99	Mm.1062	NM_009425	Tnfsf10	Tumor necrosis factor (ligand) superfamily, member 10	A33004212Rik
100	Mm.344820	NM_011614	Tnfsf12	Tumor necrosis factor (ligand) superfamily, member 12	AP03L/DR3L
101	Mm.307668	NM_019418	Tnfsf14	Tumor necrosis factor (ligand) superfamily, member 14	HVEM/LHVEM/L
102	Mm.4861	NM_011616	Cd40lg	CD40 ligand	CD154/Cd40I
103	Mm.3355	NM_010177	FasL	Fas ligand (TNF superfamily, member 6)	APT1LG1/CD178
104	Mm.239514	NM_009421	Traf1	Tnf receptor-associated factor 1	4732496E14Rik
105	Mm.3399	NM_009422	Traf2	Tnf receptor-associated factor 2	A1325259
106	Mm.27431	NM_011632	Traf3	Tnf receptor-associated factor 3	A1528849/CAP-1
107	Mm.373546	NM_009423	Traf4	Tnf receptor associated factor 4	CART1
108	Mm.299292	NM_011633	Traf5	Tnf receptor-associated factor 5	TRAF5
109	Mm.222	NM_011640	Trp53	Transformation related protein 53	bbl/bfY
110	Mm.287450	NM_173378	Trp53bp2	Transformation related protein 53 binding protein 2	53BP2/A1746547
111	Mm.28708	NM_021897	Trp53inp1	Transformation related protein 53 inducible nuclear protein 1	2700057G22Rik/SIP
112	Mm.20894	NM_011641	Trp63	Transformation related protein 63	A1462811/Ket
113	Mm.78015	NM_011642	Trp73	Transformation related protein 73	p73
114	Blank	Blank	Blank	Blank	
115	N/A	L08752	PUC18	PUC18 Plasmid DNA	pUC18
116	Blank	Blank	Blank	Blank	
117	Blank	Blank	Blank	Blank	
118	N/A	N/A	AS1R2	Artificial Sequence 1 Related 2 (80% identity)(48/60)	N/A
119	N/A	N/A	AS1R1	Artificial Sequence 1 Related 1 (90% identity)(56/60)	N/A
120	N/A	N/A	AS1	Artificial Sequence 1	N/A
121	Mm.180003	NM_024277	Rps27a	Ribosomal protein S27a	Rps27a
122	Mm.163	NM_009735	B2m	Beta-2 microglobulin	B2m
123	Mm.2180	NM_008302	Hspcb	Heat shock protein 1, beta	Hsp84
124	Mm.2180	NM_008302	Hspcb	Heat shock protein 1, beta	Hsp84
125	Mm.5246	NM_008907	Ppia	Peptidylprolyl isomerase A	CyclophilinA
126	Mm.5246	NM_008907	Ppia	Peptidylprolyl isomerase A	CyclophilinA
127	N/A	N/A	BAS2C	Biotinylated Artificial Sequence 2 Complementary sequence	N/A
128	N/A	N/A	BAS2C	Biotinylated Artificial Sequence 2 Complementary sequence	N/A