ExProfile™ Human Apoptosis Gene qPCR Array

For focused group profiling of human apoptosis related genes expression

Cat. No. QG099-A (1 x 96-well plate, Format A)
Cat. No. QG099-B (1 x 96-well plate, Format B)
Cat. No. QG099-C (1 x 96-well plate, Format C)
Cat. No. QG099-D (1 x 96-well plate, Format D)
Cat. No. QG099-E (1 x 96-well plate, Format E)

Available as 1 set or 6 sets. Each set contains 84 unique gene primers deposited in one 96-well plates.

Introduction

The ExProfile human apoptosis related gene qPCR array profiles the expression of 84 human genes related to apoptosis. These genes are carefully chosen for their close pathway correlation based on a thorough literature search of peer-reviewed publications, mainly including genes that encode activators and inhibitors of apoptosis. This array allows researchers to study the related genes to gain understanding of their roles in the functioning and characterization of apoptosis.

- QG099 plate 01: 84 unique gene PCR primer pairs

Shipping and storage condition

Shipped at room temperate
Stable for at least 6 months when stored at -20℃

Array format

GeneCopoeia provides five qPCR array formats (A, B, C, D, and E) suitable for use with the following real-time cyclers.

Important note: Upon receiving, please check to make sure that the correct array format was ordered to ensure the compatibility with your qPCR instrument.

Plate format	Instrument provider	qPCR instrument model
A (96-well)	Applied Biosystems	5700, 7000, 7300, 7500, 7700, 7900HT (Standard 96-well block), ViiA™7 (Standard 96-well block)
B (96-well)	Applied Biosystems	7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA™7 (Fast block)
C (96-well)	Bio-Rad Laboratories	iCycler iQ®, MyiQ™, iQ™5
D (96-well)	Bio-Rad Laboratories	CFX96™, DNA Engine Opticon™, DNA Engine Opticon 2™, Chromo4™
E (96-well)	Roche Applied Science	LightCycler® 480 (96-well block)

Quality control

1. Each pair of primers in the ExProfile gene qPCR array has been experimentally validated to yield a single dissociation curve peak and to generate a single amplicon of the correct size for the targeted gene.
2. The positive PCR controls (PCR) have been verified to amplify a single amplicon of the correct size with Ct values around **20±2**.
3. The Spike-in reverse transcription controls (RT) have been verified to amplify a single amplicon of the correct size with Ct values around **20±3**.
4. R^2 > 0.99 was observed for high inter/ intra-array reproducibility.

Materials required but not provided

All-in-One™ First-Strand cDNA Synthesis Kit
All-in-One™ qPCR Mix
Total RNA extraction kit (RNAzol® RT RNA extraction reagent is recommended)
DNase/RNase free tips, PCR reaction tubes, 1.5 ml microcentrifuge tubes
5 ml and 10 ml graduated pipettes, beakers, flasks, and cylinders
10 µl to 1,000 µl adjustable single channel micropipettes with disposable tips
5 µl to 20 µl adjustable multichannel micropipette, disposable tips, and reservoir
qPCR instrument, compatible with gene qPCR arrays ordered

Array layout

	1	2	3	4	5	6	7	8	9	10	11	12
A	AKT1	APAF1	API5	AVEN	BAD	BAG1	BAG3	BAG4	BAK1	BAX	BBC3	BCL10
B	BCL2	BCL2A1	BCL2L1	BCL2L11	BCL2L14	BCL2L2	BCL6	BFAR	BIK	BIRC2	BIRC3	BIRC4
C	BIRC5	BNIP1	BNIP2	BNIP3	BNIP3L	BOK	CARD10	CASP2	CASP3	CASP7	CASP8	CASP9
D	CD40	CLU	DAD1	DAP	DAPK1	DAPK2	DDIT3	DFFA	DIABLO	DPF2	E2F1	E2F2
E	FADD	FAS	FASLG	FGFR3	FOXO3A	GADD45G	GPX1	GSK3B	HIF1A	HIPK2	HRK	HSPA1A
F	HTRA2	IGF1	LTA	LTBR	MCL1	NAIP	NFKB1	PAWR	PERP	PRDX2	PTEN	RAD21
G	RIPK1	SIRT1	SOD1	STAT5A	STAT5B	TGFB1	TNF	TNFAIP3	TNFRSF10A	TNFRSF11B	TNFRSF1A	TNFRSF1B
H	**HGDC**	**HGDC**	**GAPDH**	**ACTB**	**B2M**	**RPL13A**	**HPRT1**	**RN18S1**	**RT**	**RT**	**PCR**	**PCR**

Figure1. Illustration of QG099 plate 01

- **Gene primer pairs**: 84 wells (A row to G row) are designated for a real-time PCR assay for genes (see the primer list).
- **HK1-6**: Six pre-deposited housekeeping gene (HK1-6) primer pairs, which can be used as endogenous positive controls as well as for array normalization.
- **GDC**: Genomic DNA controls, which can be used to specifically detect genomic DNA contamination with a high level of sensitivity.
- **RT**: Spike-in reverse transcription controls, which can be used to monitor the efficiency of the RT reactions. These pre-deposited primer pairs specifically amplify the cDNA template reversed transcribed from the spike-in control RNA in the sample.
- **PCR**: Positive PCR controls, which are used to verify the PCR efficiency by amplifying the pre-deposited DNA template with its specific pre-deposited primer pairs.

Gene primer list

Plate	Position	Catalog No. of Primer	Accession No. of Gene	Symbol
QG099-01	A01	HQP004991	NM_001014431	AKT1
QG099-01	A02	HQP008934	NM_001160	APAF1
QG099-01	A03	HQP021206	NM_006595	API5
QG099-01	A04	HQP015389	NM_020371	AVEN
QG099-01	A05	HQP015538	NM_004322	BAD
QG099-01	A06	HQP015574	NM_004323	BAG1
QG099-01	A07	HQP022872	NM_004281	BAG3
QG099-01	A08	HQP022871	NM_004874	BAG4
QG099-01	A09	HQP015917	NM_001188	BAK1
QG099-01	A10	HQP015964	NM_004324	BAX
QG099-01	A11	HQP007522	NM_014417	BBC3
QG099-01	A12	HQP021725	NM_003921	BCL10
QG099-01	B01	HQP016211	NM_000633	BCL2
QG099-01	B02	HQP016222	NM_004049	BCL2A1
QG099-01	B03	HQP016237	NM_001191	BCL2L1
QG099-01	B04	HQP000028	NM_006538	BCL2L11
QG099-01	B05	HQP019021	NM_030766	BCL2L14
QG099-01	B06	HQP016260	NM_004050	BCL2L2
QG099-01	B07	HQP016328	NM_001706	BCL6
QG099-01	B08	HQP012590	NM_016561	BFAR
QG099-01	B09	HQP016683	NM_001197	BIK
QG099-01	B10	HQP009072	NM_001166	BIRC2
QG099-01	B11	HQP009084	NM_001165	BIRC3
QG099-01	B12	HQP009091	NM_001167	BIRC4
QG099-01	C01	HQP009099	NM_001012270	BIRC5
QG099-01	C02	HQP017593	NM_001205	BNIP1
QG099-01	C03	HQP017605	NM_004330	BNIP2
QG099-01	C04	HQP017619	NM_004052	BNIP3
QG099-01	C05	HQP017631	NM_004331	BNIP3L
QG099-01	C06	HQP017642	NM_032515	BOK
QG099-01	C07	HQP008522	NM_014550	CARD10
QG099-01	C08	HQP020249	NM_032982	CASP2
QG099-01	C09	HQP020297	NM_004346	CASP3
QG099-01	C10	HQP020480	NM_001227	CASP7
QG099-01	C11	HQP018966	NM_001080124	CASP8
QG099-01	C12	HQP020648	NM_001229	CASP9
QG099-01	D01	HQP022955	NM_001250	CD40
QG099-01	D02	HQP002037	NM_001831	CLU
QG099-01	D03	HQP003943	NM_001344	DAD1
QG099-01	D04	HQP003975	NM_004394	DAP
QG099-01	D05	HQP003979	NM_004938	DAPK1
QG099-01	D06	HQP006265	NM_014326	DAPK2
QG099-01	D07	HQP004127	NM_004083	DDIT3

QG099-01	D08	HQP004201	NM_004401	DFFA
QG099-01	D09	HQP015116	NM_019887	DIABLO
QG099-01	D10	HQP016218	NM_006268	DPF2
QG099-01	D11	HQP004524	NM_005225	E2F1
QG099-01	D12	HQP004526	NM_004091	E2F2
QG099-01	E01	HQP021526	NM_003824	FADD
QG099-01	E02	HQP009651	NM_000043	FAS
QG099-01	E03	HQP009671	NM_000639	FASLG
QG099-01	E04	HQP005434	NM_000142	FGFR3
QG099-01	E05	HQP005759	NM_001455	FOXO3A
QG099-01	E06	HQP001042	NM_006705	GADD45G
QG099-01	E07	HQP008279	NM_000581	GPX1
QG099-01	E08	HQP008469	NM_002093	GSK3B
QG099-01	E09	HQP008831	NM_001530	HIF1A
QG099-01	E10	HQP008358	NM_022740	HIPK2
QG099-01	E11	HQP021494	NM_003806	HRK
QG099-01	E12	HQP009077	NM_005345	HSPA1A
QG099-01	F01	HQP007710	NM_013247	HTRA2
QG099-01	F02	HQP009518	NM_000618	IGF1
QG099-01	F03	HQP010907	NM_000595	LTA
QG099-01	F04	HQP010915	NM_002342	LTBR
QG099-01	F05	HQP011104	NM_021960	MCL1
QG099-01	F06	HQP011670	NM_004536	NAIP
QG099-01	F07	HQP011807	NM_003998	NFKB1
QG099-01	F08	HQP012197	NM_002583	PAWR
QG099-01	F09	HQP016753	NM_022121	PERP
QG099-01	F10	HQP018000	NM_005809	PRDX2
QG099-01	F11	HQP015535	NM_000314	PTEN
QG099-01	F12	HQP016074	NM_006265	RAD21
QG099-01	G01	HQP021492	NM_003804	RIPK1
QG099-01	G02	HQP006080	NM_012238	SIRT1
QG099-01	G03	HQP017615	NM_000454	SOD1
QG099-01	G04	HQP017771	NM_003152	STAT5A
QG099-01	G05	HQP017774	NM_012448	STAT5B
QG099-01	G06	HQP018044	NM_000660	TGFB1
QG099-01	G07	HQP018141	NM_000594	TNF
QG099-01	G08	HQP018145	NM_006290	TNFAIP3
QG099-01	G09	HQP021557	NM_003844	TNFRSF10A
QG099-01	G10	HQP012049	NM_002546	TNFRSF11B
QG099-01	G11	HQP018148	NM_001065	TNFRSF1A
QG099-01	G12	HQP018149	NM_001066	TNFRSF1B
QG099-01	H01	HGDC		
QG099-01	H02	HGDC		
QG099-01	H03	HQP006940	NM_002046	GAPDH
QG099-01	H04	HQP016381	NM_001101	ACTB
QG099-01	H05	HQP015171	NM_004048	B2M
QG099-01	H06	HQP006171	NM_012423	RPL13A

QG099-01	H07	HQP009026	NM_000194	HPRT1
QG099-01	H08	HQP054253	NR_003286	RN18S1
QG099-01	H09	RT		
QG099-01	H10	RT		
QG099-01	H11	PCR		
QG099-01	H12	PCR		

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Following terms and conditions apply to use of ExProfile™ Human Apoptosis Gene qPCR Array (the Product). If the terms and conditions are not acceptable, the Product in its entirety must be returned to GeneCopoeia within 5 calendar days. A limited End-User license is granted to the purchaser of the Product. The Product shall be used by the purchaser for internal research purposes only. The Product is expressly not designed, intended, or warranted for use in humans or for therapeutic or diagnostic use. The Product must not be resold, repackaged or modified for resale, or used to manufacture commercial products or deliver information obtained in service without prior written consent from GeneCopoeia. This Product should be used in accordance with the NIH guidelines developed for recombinant DNA and genetic research. Use of any part of the Product constitutes acceptance of the above terms.

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