

ExProfile™ Human Lipoprotein Signaling & Cholesterol Metabolism Related Gene qPCR Array

For focused group profiling of human lipoprotein signaling and cholesterol metabolism genes expression

Cat. No. QG036-A (1 x 96-well plate, Format A)

Cat. No. QG036-B (1 x 96-well plate, Format B)

Cat. No. QG036-C (1 x 96-well plate, Format C)

Cat. No. QG036-D (1 x 96-well plate, Format D)

Cat. No. QG036-E (1 x 96-well plate, Format E)

Plates available individually or as a set of 6. Each set contains 84 unique gene primer pairs deposited in one 96-well plate.

Introduction

The ExProfile human lipoprotein signaling and cholesterol metabolism related gene qPCR array profiles the expression of 84 human genes related to lipoprotein transport and cholesterol metabolism. These genes are carefully chosen for their close correlation based on a thorough literature search of peer-reviewed publications, mainly including genes that encode LDL receptors and associated proteins, LDL associated proteins, HDL associated proteins, cholesterol transport, and genes involved in cholesterol metabolism. This array allows researchers to study the related genes to gain understanding of their roles in lipoprotein transport and cholesterol metabolism.

- QG036 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°C

Array format

GeneCopia 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	INSIG1	HPRT1	VLDLR	TRERF1	TM7SF2	STAB1	SREBF2	SORL1	SOAT1	SNX17	SCARF1	SCAP
B	PRKAG2	PRKAA2	PRKAA1	PPARD	PMVK	OSBPL1A	OLR1	NSDHL	NR1H4	NR0B2	MVK	MBTPS1
C	LRPAP1	LRP6	LRP12	LRP10	LIPE	LEP	LDLR	LCAT	INSIG2	INSIG1	IL4	HMGCS2
D	HMGCS1	HMGCR	FDPS	FDFT1	ELA3A	DHCR7	DHCR24	CYP7B1	CYP7A1	CYP51A1	CYP46A1	CYP39A1
E	CYP11A1	CXCL16	COLEC12	CNBP	CETP	CEL	CDH13	APOL2	APOL1	APOF	APOE	APOD
F	APOB	APOA4	APOA2	APOA1	ANGPTL3	AKR1D1	ABCA1	OSBPL1A	PRKAG2	OSBPL5	PCSK9	ABCG1
G	ZMYND15	ANKRA2	CYB5R3	ELA3B	HDLBP	IDI1	IDI2	LDLRAP1	MVD	NPC1L1	SREBF1	STAB2
H	HGDC	HGDC	GAPDH	ACTB	B2M	RPL13A	HPRT1	RN18S1	RT	RT	PCR	PCR

Figure1. Illustration of QG036 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
QG036-01	A01	HQP009759	NM_198337	INSIG1
QG036-01	A02	HQP009026	NM_000194	HPRT1
QG036-01	A03	HQP018495	NM_003383	VLDLR
QG036-01	A04	HQP014730	NM_033502	TRERF1
QG036-01	A05	HQP018127	NM_003273	TM7SF2
QG036-01	A06	HQP005820	NM_015136	STAB1
QG036-01	A07	HQP017705	NM_004599	SREBF2
QG036-01	A08	HQP017624	NM_003105	SORL1
QG036-01	A09	HQP017613	NM_003101	SOAT1
QG036-01	A10	HQP023197	NM_014748	SNX17
QG036-01	A11	HQP021308	NM_003693	SCARF1
QG036-01	A12	HQP005608	NM_012235	SCAP
QG036-01	B01	HQP012723	NM_016203	PRKAG2
QG036-01	B02	HQP014541	NM_006252	PRKAA2
QG036-01	B03	HQP014530	NM_006251	PRKAA1
QG036-01	B04	HQP013627	NM_006238	PPARD
QG036-01	B05	HQP000794	NM_006556	PMVK
QG036-01	B06	HQP001722	NM_018030	OSBPL1A
QG036-01	B07	HQP012035	NM_002543	OLR1
QG036-01	B08	HQP012223	NM_015922	NSDHL
QG036-01	B09	HQP023437	NM_005123	NR1H4
QG036-01	B10	HQP020670	NM_021969	NR0B2
QG036-01	B11	HQP011581	NM_000431	MVK
QG036-01	B12	HQP021471	NM_003791	MBTPS1
QG036-01	C01	HQP010885	NM_002337	LRPAP1
QG036-01	C02	HQP010877	NM_002336	LRP6
QG036-01	C03	HQP008641	NM_013437	LRP12
QG036-01	C04	HQP006971	NM_014045	LRP10
QG036-01	C05	HQP010627	NM_005357	LIPE
QG036-01	C06	HQP010581	NM_000230	LEP
QG036-01	C07	HQP010577	NM_000527	LDLR
QG036-01	C08	HQP010564	NM_000229	LCAT
QG036-01	C09	HQP012444	NM_016133	INSIG2
QG036-01	C10	HQP009757	NM_005542	INSIG1
QG036-01	C11	HQP009662	NM_000589	IL4
QG036-01	C12	HQP008893	NM_005518	HMGCS2
QG036-01	D01	HQP008892	NM_002130	HMGCS1
QG036-01	D02	HQP008891	NM_000859	HMGCR
QG036-01	D03	HQP005361	NM_002004	FDPS
QG036-01	D04	HQP005357	NM_004462	FDFT1
QG036-01	D05	HQP000168	NM_005747	ELA3A
QG036-01	D06	HQP004307	NM_001360	DHCR7

QG036-01	D07	HQP004308	NM_014762	DHCR24
QG036-01	D08	HQP022723	NM_004820	CYP7B1
QG036-01	D09	HQP003859	NM_000780	CYP7A1
QG036-01	D10	HQP003924	NM_000786	CYP51A1
QG036-01	D11	HQP000977	NM_006668	CYP46A1
QG036-01	D12	HQP012613	NM_016593	CYP39A1
QG036-01	E01	HQP003871	NM_000781	CYP11A1
QG036-01	E02	HQP015961	NM_022059	CXCL16
QG036-01	E03	HQP019828	NM_130386	COLEC12
QG036-01	E04	HQP018606	NM_003418	CNBP
QG036-01	E05	HQP000853	NM_000078	CETP
QG036-01	E06	HQP000679	NM_001807	CEL
QG036-01	E07	HQP000162	NM_001257	CDH13
QG036-01	E08	HQP006348	NM_030882	APOL2
QG036-01	E09	HQP021220	NM_003661	APOL1
QG036-01	E10	HQP008969	NM_001638	APOF
QG036-01	E11	HQP009556	NM_000041	APOE
QG036-01	E12	HQP009519	NM_001647	APOD
QG036-01	F01	HQP009218	NM_000384	APOB
QG036-01	F02	HQP009171	NM_000482	APOA4
QG036-01	F03	HQP009139	NM_001643	APOA2
QG036-01	F04	HQP009125	NM_000039	APOA1
QG036-01	F05	HQP007675	NM_014495	ANGPTL3
QG036-01	F06	HQP017701	NM_005989	AKR1D1
QG036-01	F07	HQP004727	NM_005502	ABCA1
QG036-01	F08	HQP001723	NM_080597	OSBPL1A
QG036-01	F09	HQP012724	NM_024429	PRKAG2
QG036-01	F10	HQP001725	NM_020896	OSBPL5
QG036-01	F11	HQP006606	NM_174936	PCSK9
QG036-01	F12	HQP022987	NM_004915	ABCG1
QG036-01	G01	HQP020564	NM_032265	ZMYND15
QG036-01	G02	HQP015858	NM_023039	ANKRA2
QG036-01	G03	HQP004316	NM_007326	CYB5R3
QG036-01	G04	HQP006104	NM_007352	ELA3B
QG036-01	G05	HQP008749	NM_005336	HDLBP
QG036-01	G06	HQP009366	NM_004508	IDI1
QG036-01	G07	HQP022240	NM_033261	IDI2
QG036-01	G08	HQP007062	NM_015627	LDLRAP1
QG036-01	G09	HQP011580	NM_002461	MVD
QG036-01	G10	HQP008559	NM_013389	NPC1L1
QG036-01	G11	HQP017704	NM_004176	SREBF1
QG036-01	G12	HQP014479	NM_017564	STAB2
QG036-01	H01	HGDC		
QG036-01	H02	HGDC		
QG036-01	H03	HQP006940	NM_002046	GAPDH
QG036-01	H04	HQP016381	NM_001101	ACTB

QG036-01	H05	HQP015171	NM_004048	B2M
QG036-01	H06	HQP006171	NM_012423	RPL13A
QG036-01	H07	HQP009026	NM_000194	HPRT1
QG036-01	H08	HQP054253	NR_003286	RN18S1
QG036-01	H09	RT		
QG036-01	H10	RT		
QG036-01	H11	PCR		
QG036-01	H12	PCR		

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