

ExProfile™ Human Insulin Signaling Related Gene qPCR Array

For focused group profiling of human insulin signaling related gene expression

Cat. No. QG024-A (1 x 96-well plate, Format A)

Cat. No. QG024-B (1 x 96-well plate, Format B)

Cat. No. QG024-C (1 x 96-well plate, Format C)

Cat. No. QG024-D (1 x 96-well plate, Format D)

Cat. No. QG024-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 plates.

Introduction

The ExProfile human insulin signaling related gene qPCR array profiles the expression of 84 human genes related to insulin responsive genes. These genes are carefully chosen for their close pathway correlation based on a thorough literature search of peer-reviewed publications, and primarily include insulin receptor and target genes, as well as genes involved in the metabolism of carbohydrates, lipids, and proteins and other related biological responses. This array allows researchers to study pathway-related genes to gain understanding of their roles in the insulin signaling pathway.

- QG024 plate 01: 84 unique gene PCR primer pairs

Shipping and storage conditions

Shipped at room temperature

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 receipt, please check to make sure that the correct array format was ordered to ensure 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	ACACA	ACOX1	ADRB3	AEBP1	AKT1	AKT2	AKT3	ANG	ARAF	BCL2L1	BRAF	CAP1
B	CBL	CEBPA	DOK1	DOK2	DOK3	DUSP14	EIF2B1	EIF4EBP1	ERCC1	FASN	FBP1	FOS
C	FRAP1	FRS2	FRS3	G6PC	GCK	GPD1	GRB2	GSK3A	GSK3B	HK2	HRAS	IGF1R
D	IGF2	IGFBP1	INS	INSR	IRS1	IRS4	JUN	LDLR	LEP	MAP2K1	MAPK1	NCK1
E	NOS2A	NPY	PCK2	PDPK1	PIK3CA	PIK3R1	PIK3R2	PKM2	PPARG	PPP1CA	PRKCG	PRKCI
F	PRL	PTPN1	PTPRF	RAF1	RETN	RRAS	RRAS2	SERPINE1	SHC1	SLC2A1	SLC2A4	SOS1
G	TG	UCP1	VEGFA	ACACA	HPRT1	PCK2	PDPK1	PRKCZ	SHC1	SORBS1	CEBPB	GAB1
H	HGDC	HGDC	GAPDH	ACTB	B2M	RPL13A	HPRT1	RN18S1	RT	RT	PCR	PCR

Figure1. Illustration of QG024 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 reverse 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
QG024-01	A01	HQP008970	NM_198834	ACACA
QG024-01	A02	HQP013061	NM_004035	ACOX1
QG024-01	A03	HQP003812	NM_000025	ADRB3
QG024-01	A04	HQP004154	NM_001129	AEBP1
QG024-01	A05	HQP054002	NM_005163	AKT1
QG024-01	A06	HQP004995	NM_001626	AKT2
QG024-01	A07	HQP000001	NM_005465	AKT3
QG024-01	A08	HQP007968	NM_001145	ANG
QG024-01	A09	HQP009832	NM_001654	ARAF
QG024-01	A10	HQP016238	NM_138578	BCL2L1
QG024-01	A11	HQP017733	NM_004333	BRAF
QG024-01	A12	HQP000590	NM_006367	CAP1
QG024-01	B01	HQP021430	NM_005188	CBL
QG024-01	B02	HQP000615	NM_004364	CEBPA
QG024-01	B03	HQP004426	NM_001381	DOK1
QG024-01	B04	HQP021953	NM_003974	DOK2
QG024-01	B05	HQP019396	NM_024872	DOK3
QG024-01	B06	HQP001227	NM_007026	DUSP14
QG024-01	B07	HQP004650	NM_001414	EIF2B1
QG024-01	B08	HQP004676	NM_004095	EIF4EBP1
QG024-01	B09	HQP004974	NM_001983	ERCC1
QG024-01	B10	HQP005134	NM_004104	FASN
QG024-01	B11	HQP005224	NM_000507	FBP1
QG024-01	B12	HQP006188	NM_005252	FOS
QG024-01	C01	HQP006426	NM_004958	FRAP1
QG024-01	C02	HQP054010	NM_006654	FRS2
QG024-01	C03	HQP000954	NM_006653	FRS3
QG024-01	C04	HQP006508	NM_000151	G6PC
QG024-01	C05	HQP007239	NM_000162	GCK
QG024-01	C06	HQP007812	NM_005276	GPD1
QG024-01	C07	HQP008291	NM_002086	GRB2
QG024-01	C08	HQP008468	NM_019884	GSK3A
QG024-01	C09	HQP054075	NM_002093	GSK3B
QG024-01	C10	HQP008843	NM_000189	HK2
QG024-01	C11	HQP009036	NM_005343	HRAS
QG024-01	C12	HQP009523	NM_000875	IGF1R
QG024-01	D01	HQP009529	NM_000612	IGF2
QG024-01	D02	HQP009539	NM_000596	IGFBP1
QG024-01	D03	HQP009749	NM_000207	INS
QG024-01	D04	HQP009764	NM_000208	INSR
QG024-01	D05	HQP009788	NM_005544	IRS1

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QG024-01	D06	HQP020912	NM_003604	IRS4
QG024-01	D07	HQP009853	NM_002228	JUN
QG024-01	D08	HQP010577	NM_000527	LDLR
QG024-01	D09	HQP010581	NM_000230	LEP
QG024-01	D10	HQP014907	NM_002755	MAP2K1
QG024-01	D11	HQP014848	NM_002745	MAPK1
QG024-01	D12	HQP011697	NM_006153	NCK1
QG024-01	E01	HQP011866	NM_000625	NOS2A
QG024-01	E02	HQP011874	NM_000905	NPY
QG024-01	E03	HQP012354	NM_004563	PCK2
QG024-01	E04	HQP012979	NM_002613	PDPK1
QG024-01	E05	HQP013150	NM_006218	PIK3CA
QG024-01	E06	HQP013155	NM_181504	PIK3R1
QG024-01	E07	HQP013158	NM_005027	PIK3R2
QG024-01	E08	HQP013185	NM_002654	PKM2
QG024-01	E09	HQP013634	NM_015869	PPARG
QG024-01	E10	HQP013954	NM_002708	PPP1CA
QG024-01	E11	HQP014751	NM_002739	PRKCG
QG024-01	E12	HQP014771	NM_002740	PRKCI
QG024-01	F01	HQP015024	NM_000948	PRL
QG024-01	F02	HQP015828	NM_002827	PTPN1
QG024-01	F03	HQP015921	NM_002840	PTPRF
QG024-01	F04	HQP016088	NM_002880	RAF1
QG024-01	F05	HQP015160	NM_020415	RETN
QG024-01	F06	HQP016502	NM_006270	RRAS
QG024-01	F07	HQP005458	NM_012250	RRAS2
QG024-01	F08	HQP012154	NM_000602	SERPINE1
QG024-01	F09	HQP017080	NM_003029	SHC1
QG024-01	F10	HQP017350	NM_006516	SLC2A1
QG024-01	F11	HQP053960	NM_001042	SLC2A4
QG024-01	F12	HQP017625	NM_005633	SOS1
QG024-01	G01	HQP018042	NM_003235	TG
QG024-01	G02	HQP018402	NM_021833	UCP1
QG024-01	G03	HQP018481	NM_003376	VEGFA
QG024-01	G04	HQP008973	NM_198838	ACACA
QG024-01	G05	HQP009026	NM_000194	HPRT1
QG024-01	G06	HQP012353	NM_001018073	PCK2
QG024-01	G07	HQP012980	NM_031268	PDPK1
QG024-01	G08	HQP014829	NM_001033581	PRK CZ
QG024-01	G09	HQP017081	NM_183001	SHC1
QG024-01	G10	HQP000695	NM_001034954	SORBS1
QG024-01	G11	HQP000623	NM_005194	CEBPB
QG024-01	G12	HQP006558	NM_002039	GAB1
QG024-01	H01	HGDC		
QG024-01	H02	HGDC		
QG024-01	H03	HQP006940	NM_002046	GAPDH
QG024-01	H04	HQP016381	NM_001101	ACTB

Product Data Sheet

QG024-01	H05	HQP015171	NM_004048	B2M
QG024-01	H06	HQP006171	NM_012423	RPL13A
QG024-01	H07	HQP009026	NM_000194	HPRT1
QG024-01	H08	HQP054253	NR_003286	RN18S1
QG024-01	H09	RT		
QG024-01	H10	RT		
QG024-01	H11	PCR		
QG024-01	H12	PCR		

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