ExProfile™ Human Drug Transporters Related Gene qPCR Array

For focused group profiling of human drug transporters genes expression

Cat. No. QG087-A (1 x 96-well plate, Format A)
Cat. No. QG087-B (1 x 96-well plate, Format B)
Cat. No. QG087-C (1 x 96-well plate, Format C)
Cat. No. QG087-D (1 x 96-well plate, Format D)
Cat. No. QG087-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 drug tanspoters related gene qPCR array profiles the expression of 84 human genes related to drug tansporters. These genes are carefully chosen for their close pathway correlation based on a thorough literature search of peer-reviewed publications, mainly including genes that play important roles in absorption, distribution, metabolism and excretion of many drugs. This array allows researchers to study the related genes to gain understanding of their roles in the functioning and characterization of drug transport and metabolism.

- QG087 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	ABCC6	ABCC5	HPRT1	VDAC1	TAP2	TAP1	SLCO4A1	SLCO3A1	SLCO2B1	SLCO2A1	SLCO1B3	SLCO1B1
B	SLC7A9	SLC7A8	SLC7A7	SLC7A6	SLC7A11	SLC5A4	SLC5A1	SLC3A2	SLC3A1	SLC38A5	SLC38A2	SLC31A1
C	SLC2A3	SLC2A2	SLC2A1	SLC29A2	SLC29A1	SLC28A3	SLC28A2	SLC28A1	SLC22A9	SLC22A8	SLC22A3	SLC22A2
D	SLC22A1	SLC19A3	SLC19A2	SLC19A1	SLC16A3	SLC16A2	SLC16A1	SLC15A2	SLC15A1	SLC10A2	SLC10A1	MVP
E	ATP7B	AQP9	AQP1	ABCG8	ABCG2	ABCF1	ABCD3	ABCD1	ABCC6	ABCC5	ABCC3	ABCC2
F	ABCC12	ABCC11	ABCC10	ABCC1	ABCB6	ABCB5	ABCB4	ABCB11	ABCB1	ABCA9	ABCA4	ABCA3
G	ABCA13	ABCA1	ABCA12	ABCA2	ABCD4	ATP6V0C	ATP7A	SLC22A6	SLC22A7	SLC25A13	SLCO1A2	VDAC2
H	**HGDC**	**HGDC**	**GAPDH**	**ACTB**	**B2M**	**RPL13A**	**HPRT1**	**RN18S1**	**RT**	**RT**	**PCR**	**PCR**

Figure1. Illustration of QG087 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
QG087-01	A01	HQP009816	NM_001079528	ABCC6
QG087-01	A02	HQP000074	NM_001023587	ABCC5
QG087-01	A03	HQP009026	NM_000194	HPRT1
QG087-01	A04	HQP018470	NM_003374	VDAC1
QG087-01	A05	HQP017900	NM_000544	TAP2
QG087-01	A06	HQP017899	NM_000593	TAP1
QG087-01	A07	HQP007819	NM_016354	SLCO4A1
QG087-01	A08	HQP007820	NM_013272	SLCO3A1
QG087-01	A09	HQP001541	NM_007256	SLCO2B1
QG087-01	A10	HQP017486	NM_005630	SLCO2A1
QG087-01	A11	HQP007821	NM_019844	SLCO1B3
QG087-01	A12	HQP000720	NM_006446	SLCO1B1
QG087-01	B01	HQP001306	NM_014270	SLC7A9
QG087-01	B02	HQP006094	NM_182728	SLC7A8
QG087-01	B03	HQP021984	NM_003982	SLC7A7
QG087-01	B04	HQP053994	NM_003983	SLC7A6
QG087-01	B05	HQP006307	NM_014331	SLC7A11
QG087-01	B06	HQP017389	NM_014227	SLC5A4
QG087-01	B07	HQP017368	NM_000343	SLC5A1
QG087-01	B08	HQP017363	NM_002394	SLC3A2
QG087-01	B09	HQP017356	NM_000341	SLC3A1
QG087-01	B10	HQP022451	NM_033518	SLC38A5
QG087-01	B11	HQP013453	NM_018976	SLC38A2
QG087-01	B12	HQP002694	NM_001859	SLC31A1

QG087-01	C01	HQP017353	NM_006931	SLC2A3
QG087-01	C02	HQP017351	NM_000340	SLC2A2
QG087-01	C03	HQP017350	NM_006516	SLC2A1
QG087-01	C04	HQP008931	NM_001532	SLC29A2
QG087-01	C05	HQP053999	NM_004955	SLC29A1
QG087-01	C06	HQP016763	NM_022127	SLC28A3
QG087-01	C07	HQP022197	NM_004212	SLC28A2
QG087-01	C08	HQP022202	NM_004213	SLC28A1
QG087-01	C09	HQP001672	NM_080866	SLC22A9
QG087-01	C10	HQP022635	NM_004254	SLC22A8
QG087-01	C11	HQP017492	NM_021977	SLC22A3
QG087-01	C12	HQP017493	NM_003058	SLC22A2
QG087-01	D01	HQP017490	NM_003057	SLC22A1
QG087-01	D02	HQP019711	NM_025243	SLC19A3
QG087-01	D03	HQP000669	NM_006996	SLC19A2
QG087-01	D04	HQP017482	NM_194255	SLC19A1
QG087-01	D05	HQP053996	NM_004207	SLC16A3
QG087-01	D06	HQP017474	NM_006517	SLC16A2
QG087-01	D07	HQP017473	NM_003051	SLC16A1
QG087-01	D08	HQP017472	NM_021082	SLC15A2
QG087-01	D09	HQP017471	NM_005073	SLC15A1
QG087-01	D10	HQP017462	NM_000452	SLC10A2
QG087-01	D11	HQP017461	NM_003049	SLC10A1
QG087-01	D12	HQP054016	NM_017458	MVP
QG087-01	E01	HQP013383	NM_000053	ATP7B
QG087-01	E02	HQP009790	NM_020980	AQP9

QG087-01	E03	HQP009689	NM_198098	AQP1
QG087-01	E04	HQP016876	NM_022437	ABCG8
QG087-01	E05	HQP022745	NM_004827	ABCG2
QG087-01	E06	HQP006358	NM_001090	ABCF1
QG087-01	E07	HQP015971	NM_002858	ABCD3
QG087-01	E08	HQP005065	NM_000033	ABCD1
QG087-01	E09	HQP009817	NM_001171	ABCC6
QG087-01	E10	HQP000075	NM_005688	ABCC5
QG087-01	E11	HQP021459	NM_003786	ABCC3
QG087-01	E12	HQP002260	NM_000392	ABCC2
QG087-01	F01	HQP022719	NM_033226	ABCC12
QG087-01	F02	HQP021179	NM_032583	ABCC11
QG087-01	F03	HQP021787	NM_033450	ABCC10
QG087-01	F04	HQP011322	NM_004996	ABCC1
QG087-01	F05	HQP000076	NM_005689	ABCB6
QG087-01	F06	HQP009299	NM_178559	ABCB5
QG087-01	F07	HQP013101	NM_000443	ABCB4
QG087-01	F08	HQP021388	NM_003742	ABCB11
QG087-01	F09	HQP013100	NM_000927	ABCB1
QG087-01	F10	HQP000427	NM_080283	ABCA9
QG087-01	F11	HQP006441	NM_000350	ABCA4
QG087-01	F12	HQP005199	NM_001089	ABCA3
QG087-01	G01	HQP003777	NM_152701	ABCA13
QG087-01	G02	HQP004727	NM_005502	ABCA1
QG087-01	G03	HQP007090	NM_173076	ABCA12
QG087-01	G04	HQP004999	NM_001606	ABCA2

QG087-01	G05	HQP015972	NM_005050	ABCD4
QG087-01	G06	HQP013139	NM_001694	ATP6V0C
QG087-01	G07	HQP013334	NM_000052	ATP7A
QG087-01	G08	HQP022588	NM_004790	SLC22A6
QG087-01	G09	HQP000986	NM_006672	SLC22A7
QG087-01	G10	HQP000210	NM_014251	SLC25A13
QG087-01	G11	HQP017487	NM_005075	SLCO1A2
QG087-01	G12	HQP018471	NM_003375	VDAC2
QG087-01	H01	HGDC		
QG087-01	H02	HGDC		
QG087-01	H03	HQP006940	NM_002046	GAPDH
QG087-01	H04	HQP016381	NM_001101	ACTB
QG087-01	H05	HQP015171	NM_004048	B2M
QG087-01	H06	HQP006171	NM_012423	RPL13A
QG087-01	H07	HQP009026	NM_000194	HPRT1
QG087-01	H08	HQP054253	NR_003286	RN18S1
QG087-01	H09	RT		
QG087-01	H10	RT		
QG087-01	H11	PCR		
QG087-01	H12	PCR		

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