ExProfile™ Human Breast Cancer & Estrogen Receptor Signaling Related Gene qPCR Array

For focused group profiling of human breast cancer and estrogen receptor signaling genes expression

Cat. No. QG005-A (1 x 96-well plate, Format A)
Cat. No. QG005-B (1 x 96-well plate, Format B)
Cat. No. QG005-C (1 x 96-well plate, Format C)
Cat. No. QG005-D (1 x 96-well plate, Format D)
Cat. No. QG005-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 breast cancer and estrogen receptor signaling related gene qPCR array profiles the expression of 84 human genes related to breast cancer regulation and estrogen receptor-dependent signal transduction. These genes are carefully chosen for their close pathway correlation based on a thorough literature search of peer-reviewed publications, mainly including genes involved in breast cancer, estrogen receptor-dependent signal pathway, breast cancer prognosis and cancer cells' response to chemotherapy. This array allows researchers to study the pathway-related genes to gain understanding of their roles in breast cancer regulation and estrogen receptor-dependent signal pathway.

- QG005 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	FAS	CD44	HPRT1	AR	VEGFA	TP53	TOP2A	TNFAIP2	TIE1	THBS2	THBS1	TGFA
B	TFF1	STC2	SPRR1B	SERPINE1	SERPINB5	SERPINA3	SCGB2A1	RPL27	RAC2	PTGS2	PTEN	PLAU
C	PGR	PAPPA	NME1	NGFR	NGFB	NFYB	MUC1	MT3	MKI67	MAP2K7	KRT19	KRT18
D	KLK5	KLF5	KIT	JUN	ITGB4	ITGA6	IL6ST	IL6R	IL6	IL2RA	IGFBP2	ID2
E	HSPB1	HMGB1	GATA3	GABRP	FOSL1	FGF1	FASLG	FAS	ESR2	ESR1	ERBB2	EGFR
F	DLC1	CYP19A1	CTSD	CTSB	CTNNB1	COL6A1	CLU	CDKN2A	CDKN1B	CDKN1A	CD44	CCNE1
G	CCND1	CCNA2	CCNA1	C3	BCL2L2	BCL2	BAG1	BAD	AR	CDH1	CLDN7	FLRT1
H	**HGDC**	**HGDC**	**GAPDH**	**ACTB**	**B2M**	**RPL13A**	**HPRT1**	**RN18S1**	**RT**	**RT**	**PCR**	**PCR**

Figure1. Illustration of QG005 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
QG005-01	A01	HQP009653	NM_152872	FAS
QG005-01	A02	HQP022974	NM_001001390	CD44
QG005-01	A03	HQP009026	NM_000194	HPRT1
QG005-01	A04	HQP009802	NM_001011645	AR
QG005-01	A05	HQP018481	NM_003376	VEGFA
QG005-01	A06	HQP018175	NM_000546	TP53
QG005-01	A07	HQP018172	NM_001067	TOP2A
QG005-01	A08	HQP018144	NM_006291	TNFAIP2
QG005-01	A09	HQP018091	NM_005424	TIE1
QG005-01	A10	HQP018069	NM_003247	THBS2
QG005-01	A11	HQP018068	NM_003246	THBS1
QG005-01	A12	HQP018043	NM_003236	TGFA
QG005-01	B01	HQP018035	NM_003225	TFF1
QG005-01	B02	HQP021341	NM_003714	STC2
QG005-01	B03	HQP017678	NM_003125	SPRR1B
QG005-01	B04	HQP012154	NM_000602	SERPINE1
QG005-01	B05	HQP013125	NM_002639	SERPINB5
QG005-01	B06	HQP002590	NM_001085	SERPINA3
QG005-01	B07	HQP011193	NM_002407	SCGB2A1
QG005-01	B08	HQP016429	NM_000988	RPL27
QG005-01	B09	HQP016067	NM_002872	RAC2
QG005-01	B10	HQP015598	NM_000963	PTGS2
QG005-01	B11	HQP015535	NM_000314	PTEN
QG005-01	B12	HQP013204	NM_002658	PLAU
QG005-01	C01	HQP013099	NM_000926	PGR
QG005-01	C02	HQP012189	NM_002581	PAPPA
QG005-01	C03	HQP011853	NM_000269	NME1
QG005-01	C04	HQP011828	NM_002507	NGFR
QG005-01	C05	HQP011827	NM_002506	NGFB
QG005-01	C06	HQP011825	NM_006166	NFYB
QG005-01	C07	HQP011559	NM_001018016	MUC1
QG005-01	C08	HQP011539	NM_005954	MT3
QG005-01	C09	HQP011232	NM_002417	MKI67
QG005-01	C10	HQP014926	NM_145185	MAP2K7
QG005-01	C11	HQP010233	NM_002276	KRT19
QG005-01	C12	HQP010197	NM_000224	KRT18
QG005-01	D01	HQP054014	NM_012427	KLK5

QG005-01	D02	HQP017898	NM_001730	KLF5
QG005-01	D03	HQP010099	NM_000222	KIT
QG005-01	D04	HQP009853	NM_002228	JUN
QG005-01	D05	HQP009819	NM_000213	ITGB4
QG005-01	D06	HQP009774	NM_000210	ITGA6
QG005-01	D07	HQP009674	NM_002184	IL6ST
QG005-01	D08	HQP009672	NM_000565	IL6R
QG005-01	D09	HQP009670	NM_000600	IL6
QG005-01	D10	HQP009650	NM_000417	IL2RA
QG005-01	D11	HQP009541	NM_000597	IGFBP2
QG005-01	D12	HQP009273	NM_002166	ID2
QG005-01	E01	HQP009089	NM_001540	HSPB1
QG005-01	E02	HQP008883	NM_002128	HMGB1
QG005-01	E03	HQP007166	NM_002051	GATA3
QG005-01	E04	HQP006660	NM_014211	GABRP
QG005-01	E05	HQP019708	NM_005438	FOSL1
QG005-01	E06	HQP005400	NM_000800	FGF1
QG005-01	E07	HQP009671	NM_000639	FASLG
QG005-01	E08	HQP009651	NM_000043	FAS
QG005-01	E09	HQP005002	NM_001437	ESR2
QG005-01	E10	HQP004998	NM_000125	ESR1
QG005-01	E11	HQP004969	NM_004448	ERBB2
QG005-01	E12	HQP004605	NM_005228	EGFR
QG005-01	F01	HQP000462	NM_006094	DLC1
QG005-01	F02	HQP003904	NM_000103	CYP19A1
QG005-01	F03	HQP003599	NM_001909	CTSD
QG005-01	F04	HQP003596	NM_001908	CTSB
QG005-01	F05	HQP003539	NM_001904	CTNNB1
QG005-01	F06	HQP002549	NM_001848	COL6A1
QG005-01	F07	HQP002037	NM_001831	CLU
QG005-01	F08	HQP000369	NM_000077	CDKN2A
QG005-01	F09	HQP000342	NM_004064	CDKN1B
QG005-01	F10	HQP000331	NM_000389	CDKN1A
QG005-01	F11	HQP022972	NM_000610	CD44
QG005-01	F12	HQP021819	NM_001238	CCNE1
QG005-01	G01	HQP016204	NM_053056	CCND1
QG005-01	G02	HQP021701	NM_001237	CCNA2
QG005-01	G03	HQP021692	NM_003914	CCNA1
QG005-01	G04	HQP018238	NM_000064	C3
QG005-01	G05	HQP016260	NM_004050	BCL2L2
QG005-01	G06	HQP016211	NM_000633	BCL2

QG005-01	G07	HQP015574	NM_004323	BAG1
QG005-01	G08	HQP015538	NM_004322	BAD
QG005-01	G09	HQP009801	NM_000044	AR
QG005-01	G10	HQP023466	NM_004360	CDH1
QG005-01	G11	HQP002852	NM_001307	CLDN7
QG005-01	G12	HQP006343	NM_013280	FLRT1
QG005-01	H01	HGDC		
QG005-01	H02	HGDC		
QG005-01	H03	HQP006940	NM_002046	GAPDH
QG005-01	H04	HQP016381	NM_001101	ACTB
QG005-01	H05	HQP015171	NM_004048	B2M
QG005-01	H06	HQP006171	NM_012423	RPL13A
QG005-01	H07	HQP009026	NM_000194	HPRT1
QG005-01	H08	HQP054253	NR_003286	RN18S1
QG005-01	H09	RT		
QG005-01	H10	RT		
QG005-01	H11	PCR		
QG005-01	H12	PCR		

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Following terms and conditions apply to use of ExProfile™ Human Breast Cancer & Estrogen Receptor Signaling Related 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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GeneCopoeia, Inc.
9620 Medical Center Drive, Suite 101
Rockville, MD 20850
+1 (301) 762-0888
+1 (866) 360-9531
inquiry@genecopoeia.com