

# **RT<sup>2</sup> Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)**

## **Pig Drug Transporters**

**Cat. no. 330231 PASS-070Z**

**For pathway expression analysis**

<b>Format</b>	<b>For use with the following real-time cyclers</b>
RT <sup>2</sup> Profiler PCR Array, Format A	Applied Biosystems <sup>®</sup> models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA <sup>™</sup> 7 (96-well block); Bio-Rad <sup>®</sup> models iCycler <sup>®</sup> , iQ <sup>™</sup> 5, MyiQ <sup>™</sup> , MyiQ2; Bio-Rad/MJ Research Chromo4 <sup>™</sup> ; Eppendorf <sup>®</sup> Mastercycler <sup>®</sup> ep realplex models 2, 2s, 4, 4s; Stratagene <sup>®</sup> models Mx3005P <sup>®</sup> , Mx3000P <sup>®</sup> ; Takara TP-800
RT <sup>2</sup> Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus <sup>™</sup> , ViiA 7 (Fast block)
RT <sup>2</sup> Profiler PCR Array, Format D	Bio-Rad CFX96 <sup>™</sup> ; Bio-Rad/MJ Research models DNA Engine Opticon <sup>®</sup> , DNA Engine Opticon 2; Stratagene Mx4000 <sup>®</sup>
RT <sup>2</sup> Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384 <sup>™</sup>
RT <sup>2</sup> Profiler PCR Array, Format F	Roche <sup>®</sup> LightCycler <sup>®</sup> 480 (96-well block)
RT <sup>2</sup> Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT <sup>2</sup> Profiler PCR Array, Format H	Fluidigm <sup>®</sup> BioMark <sup>™</sup>



**Sample & Assay Technologies**

## Description

The Pig Drug Transporters RT<sup>2</sup> Profiler PCR Array contains 84 transporter genes. Transporters play key roles in pharmacology, affecting entry and extrusion of drugs into and out of cells. Transporters important to the absorption, distribution, metabolism and excretion of many drugs are included on this array. In addition, transporters that contribute to sensitivity and resistance of tumor cells to anticancer agents are represented. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to drug transporters with this array.

For further details, consult the *RT<sup>2</sup> Profiler PCR Array Handbook*.

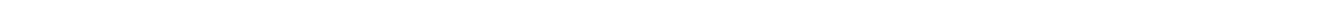
## Shipping and storage

RT<sup>2</sup> Profiler PCR Arrays in formats A, C, D, E, F, and G are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products. RT<sup>2</sup> Profiler PCR Arrays in format H are shipped on dry ice or blue ice packs.

For long term storage, keep plates at -20°C.

Note: Ensure that you have the correct RT<sup>2</sup> Profiler PCR Array format for your real-time cycler (see table above).

Note: Open the package and store the products appropriately immediately on receipt.



## Array layout (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT<sup>2</sup> Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
<b>A</b>	ABCA1	ABCA13	ABCA3	ABCA4	ABCA5	ABCA9	ABCB1	ABCB11	ABCB4	ABCB6	ABCB7	ABCC1
<b>B</b>	ABCC10	ABCC12	ABCC2	ABCC3	ABCD1	ABCD2	ABCE1	ABCF1	ABCG2	ABCG8	AQP1	AQP7
<b>C</b>	AQP9	ATP6V0C	ATP7A	ATP7B	CTR1	LOC1000496 83	LOC1001549 11	LOC1005124 45	LOC1005135 13	LOC1005136 26	LOC1006208 29	LOC1006223 99
<b>D</b>	LOC1007384 25	MVP	SLC15A1	SLC15A2	SLC16A1	SLC16A3	SLC17A3	SLC18A1	SLC19A1	SLC19A2	SLC19A3	SLC22A1
<b>E</b>	SLC22A11	SLC22A2	SLC22A3	SLC22A5	SLC22A6	SLC22A7	SLC22A8	SLC25A13	SLC28A2	SLC29A1	SLC29A2	SLC2A1
<b>F</b>	SLC2A2	SLC2A3	SLC31A2	SLC38A2	SLC38A5	SLC3A1	SLC3A2	SLC47A2	SLC5A1	SLC5A4	SLC7A1	SLC7A10
<b>G</b>	SLC7A2	SLC7A3	SLC7A4	SLC7A7	SLC7A8	SLC7A9	SLCO1A2	SLCO2A1	SLCO2B1	SLCO3A1	VDAC1	VDAC2
<b>H</b>	ACTB	B2M	GAPDH	HPRT1	RPL13A	SGDC	RTC	RTC	PPC	PPC	PPC	PPC

## Gene table: RT<sup>2</sup> Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description	Assay
A01	Ssc.97021	XM_013993722	ABCA1	ATP-binding cassette, sub-family A (ABC1), member 1	PPS02290A
A02	N/A	XM_013977957	ABCA13	ATP-binding cassette, sub-family A (ABC1), member 13	PPS71787A
A03	N/A	XM_005655176	ABCA3	ATP-binding cassette, sub-family A (ABC1), member 3	PPS05937A
A04	Ssc.10677	XM_001924464	ABCA4	ABC transporter	PPS08879A
A05	N/A	XM_013980813	ABCA5	ATP-binding cassette, sub-family A (ABC1), member 5	PPS71800A
A06	N/A	XM_003131258	ABCA9	ATP-binding cassette, sub-family A (ABC1), member 9	PPS06284A
A07	Ssc.98237	XM_003130205	ABCB1	ATP-binding cassette, sub-family B (MDR/TAP), member 1	PPS00256A
A08	Ssc.50371	XM_003133457	ABCB11	ATP-binding cassette, sub-family B (MDR/TAP), member 11	PPS05955A
A09	Ssc.51683	XM_005656694	ABCB4	ATP-binding cassette, sub-family B (MDR/TAP), member 4	PPS02138A
A10	Ssc.19041	XM_005672225	ABCB6	ATP-binding cassette, sub-family B (MDR/TAP), member 6	PPS08880A
A11	Ssc.21338	XM_001928719	ABCB7	ATP-binding cassette, sub-family B (MDR/TAP), member 7	PPS03914A
A12	Ssc.100203	XM_013995627	ABCC1	ATP-binding cassette, sub-family C (CFTR/MRP), member 1	PPS71801A
B01	N/A	XM_013977961	ABCC10	ATP-binding cassette, sub-family C (CFTR/MRP), member 10	PPS02488A
B02	N/A	XM_013991880	ABCC12	ATP-binding cassette, sub-family C (CFTR/MRP), member 12	PPS71788A
B03	Ssc.16332	XM_001929359	ABCC2	ATP-binding cassette, sub-family C (CFTR/MRP), member 2	PPS00843A
B04	Ssc.80792	XM_003131575	ABCC3	Canalicular multispecific organic anion transporter 2-like	PPS10456A
B05	Ssc.39422	XM_003135473	ABCD1	ATP-binding cassette, sub-family D (ALD), member 1	PPS06162A
B06	Ssc.102398	XM_005664139	ABCD2	ATP-binding cassette, sub-family D (ALD), member 2	PPS06299A
B07	Ssc.97232	XM_003129170	ABCE1	ATP-binding cassette sub-family E member 1-like	PPS15038A
B08	Ssc.1504	NM_001123069	ABCF1	ATP-binding cassette, sub-family F (GCN20), member 1	PPS02055A
B09	Ssc.94354	NM_214010	ABCG2	ATP-binding cassette, sub-family G (WHITE), member 2	PPS00413A
B10	Ssc.26516	XM_013987908	ABCG8	ATP-binding cassette, sub-family G (WHITE), member 8	PPS01704A
B11	Ssc.85395	NM_214454	AQP1	Aquaporin 1 (Colton blood group)	PPS01086A
B12	Ssc.47024	NM_001113438	AQP7	Aquaporin 7	PPS01860A
C01	Ssc.61682	NM_001112684	AQP9	Aquaporin 9	PPS01892A
C02	Ssc.5366	XM_003124744	ATP6V0C	V-type proton ATPase 16 kDa proteolipid subunit-like	PPS12741A
C03	Ssc.38208	XM_003135200	ATP7A	ATPase, Cu++ transporting, alpha polypeptide	PPS00497A
C04	Ssc.49767	XM_005668387	ATP7B	ATPase, Cu++ transporting, beta polypeptide	PPS01736A
C05	Ssc.10107	NM_214100	CTR1	High-affinity copper uptake protein	PPS00523A
C06	Ssc.37828	XM_013991081	LOC100049683	Solute carrier family 7 (anionic amino acid transporter light chain, xc- system), member 11	PPS01735A
C07	N/A	XM_001929196	LOC100154911	ATP-binding cassette sub-family D member 4	PPS71791A
C08	N/A	XM_013984464	LOC100512445	ATP-binding cassette, sub-family A (ABC1), member 12	PPS05103A
C09	N/A	XM_005673723	LOC100513513	Solute carrier family 16, member 2 (thyroid hormone transporter)	PPS10567A
C10	N/A	XM_013979025	LOC100513626	ATP-binding cassette, sub-family C (CFTR/MRP), member 5	PPS05276A
C11	Ssc.63195	XM_003355548	LOC100620829	Solute carrier organic anion transporter family, member 1B3	PPS07249A

Position	UniGene	GenBank	Symbol	Description	Assay
C12	N/A	XM_003353618	LOC100622399	High affinity copper uptake protein 1	PPS71792A
D01	N/A	XM_005674630	LOC100738425	Multidrug resistance-associated protein 4	PPS71789A
D02	N/A	XM_003354549	MVP	Major vault protein	PPS07364A
D03	Ssc.17339	NM_214347	SLC15A1	Solute carrier family 15 (oligopeptide transporter), member 1	PPS00927A
D04	Ssc.94556	NM_001097514	SLC15A2	Solute carrier family 15 (H <sup>+</sup> /peptide transporter), member 2	PPS01692A
D05	Ssc.98031	NM_001128445	SLC16A1	Solute carrier family 16, member 1 (monocarboxylic acid transporter 1)	PPS01897A
D06	Ssc.22067	XM_013989834	SLC16A3	Solute carrier family 16, member 3 (monocarboxylic acid transporter 4)	PPS04316A
D07	N/A	XM_013977489	SLC17A3	Solute carrier family 17 (sodium phosphate), member 4	PPS04031A
D08	Ssc.49933	XM_013990243	SLC18A1	Solute carrier family 18 (vesicular monoamine transporter), member 1	PPS03062A
D09	N/A	XM_005657183	SLC19A1	Solute carrier family 19 (folate transporter), member 1	PPS07195A
D10	Ssc.22020	NM_001142667	SLC19A2	Feline leukemia virus subgroup A receptor	PPS08887A
D11	N/A	XM_003133695	SLC19A3	Thiamine transporter 2-like	PPS10697A
D12	Ssc.23507	NM_213989	SLC22A1	Organic cation transporter 1	PPS00391A
E01	N/A	XM_003122589	SLC22A11	Solute carrier family 22 member 11-like	PPS14846A
E02	Ssc.14537	NM_213902	SLC22A2	Solute carrier family 22 (organic cation transporter), member 2	PPS00281A
E03	Ssc.44245	XM_003121106	SLC22A3	Solute carrier family 22 (extraneuronal monoamine transporter), member 3	PPS02034A
E04	Ssc.52467	XM_003123912	SLC22A5	Solute carrier family 22 (organic cation/carnitine transporter), member 5	PPS06322A
E05	Ssc.15835	NM_001001261	SLC22A6	Organic anion transporter-like	PPS00557A
E06	Ssc.54135	NM_001044617	SLC22A7	Solute carrier family 22 (organic anion transporter), member 7	PPS01529A
E07	Ssc.27597	NM_214455	SLC22A8	Solute carrier family 22 (organic anion transporter), member 8	PPS01087A
E08	Ssc.97289	NM_003130160	SLC25A13	Solute carrier family 25, member 13 (citrin)	PPS06867A
E09	N/A	XM_005659640	SLC28A2	Sodium/nucleoside cotransporter 1-like	PPS14028A
E10	Ssc.1579	NM_003128425	SLC29A1	Solute carrier family 29 (nucleoside transporters), member 1	PPS00064A
E11	N/A	XM_003122487	SLC29A2	Equilibrative nucleoside transporter 2-like	PPS12599A
E12	Ssc.96919	NM_013977359	SLC2A1	Solute carrier family 2 (facilitated glucose transporter), member 1	PPS00716B
F01	Ssc.26564	NM_001097417	SLC2A2	Solute carrier family 2 (facilitated glucose transporter), member 2	PPS00740A
F02	Ssc.58600	NM_013988404	SLC2A3	Solute carrier family 2 (facilitated glucose transporter), member 3	PPS07620A
F03	Ssc.19836	NM_001244427	SLC31A2	Solute carrier family 31 (copper transporters), member 2	PPS10930A
F04	Ssc.99550	NM_003126626	SLC38A2	Sodium-coupled neutral amino acid transporter 2-like	PPS15324A
F05	Ssc.43763	NM_001243482	SLC38A5	Solute carrier family 38, member 5	PPS07766A
F06	Ssc.7947	NM_001123042	SLC3A1	Solute carrier family 3 (cystine, dibasic and neutral amino acid transporters, activator of cystine, dibasic and neutral amino acid transport), member 1	PPS02140A
F07	Ssc.2330	XM_003353809	SLC3A2	Solute carrier family 3 (activators of dibasic and neutral amino acid transport), member 2	PPS02141A
F08	Ssc.19262	XM_003132033	SLC47A2	Multidrug and toxin extrusion protein 2-like	PPS15264A
F09	Ssc.161	NM_001164021	SLC5A1	Solute carrier family 5 (sodium/glucose cotransporter), member 1	PPS00452A
F10	Ssc.16113	NM_214182	SLC5A4	Solute carrier family 5 (low affinity glucose cotransporter), member 4	PPS00688A
F11	Ssc.87367	NM_001012613	SLC7A1	Solute carrier family 7 (cationic amino acid transporter, y <sup>+</sup> system), member 1	PPS01313A
F12	N/A	XM_003127014	SLC7A10	Solute carrier family 7 (neutral amino acid transporter light chain, asc system), member 10	PPS06993A
G01	Ssc.42516	NM_001110420	SLC7A2	Solute carrier family 7 (cationic amino acid transporter, y <sup>+</sup> system), member 2	PPS01602A
G02	Ssc.71688	NM_001130973	SLC7A3	Solute carrier family 7 (cationic amino acid transporter, y <sup>+</sup> system), member 3	PPS04361A
G03	Ssc.24373	NM_001243816	SLC7A4	Solute carrier family 7 (orphan transporter), member 4	PPS09624A
G04	Ssc.3715	NM_001110421	SLC7A7	Solute carrier family 7 (amino acid transporter light chain, y <sup>+</sup> L system), member 7	PPS01637A
G05	N/A	XM_003128550	SLC7A8	Large neutral amino acids transporter small subunit 2-like	PPS14063A
G06	Ssc.3800	NM_001110171	SLC7A9	Solute carrier family 7 (glycoprotein-associated amino acid transporter light chain, bo <sup>+</sup> system), member 9	PPS01638A
G07	Ssc.16331	NM_001256595	SLCO1A2	Solute carrier organic anion transporter family, member 1A2	PPS71794A
G08	Ssc.86815	NM_001123195	SLCO2A1	Solute carrier organic anion transporter family, member 2A1	PPS02107A
G09	Ssc.38986	NM_005667132	SLCO2B1	Solute carrier organic anion transporter family, member 2B1	PPS13261A
G10	Ssc.48131	NM_001924347	SLCO3A1	SLCO3A1 protein	PPS08973A
G11	Ssc.16732	NM_213960	VDAC1	Voltage-dependent anion channel 1	PPS00353A
G12	Ssc.56990	NM_214369	VDAC2	Voltage-dependent anion channel 2	PPS00959A
H01	Ssc.10316	NM_003124280	ACTB	Actin, beta	PPS71698A
H02	Ssc.73773	NM_213978	B2M	Beta-2-microglobulin	PPS00376A
H03	Ssc.16135	NM_001206359	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase	PPS00192A
H04	Ssc.4158	NM_001032376	HPRT1	Hypoxanthine phosphoribosyltransferase 1	PPS00668B
H05	Ssc.27927	NM_001244068	RPL13A	Ribosomal protein L13a	PPS01574A

<b>Position</b>	<b>UniGene</b>	<b>GenBank</b>	<b>Symbol</b>	<b>Description</b>	<b>Assay</b>
H06	N/A	SA_00133	SGDC	Pig Genomic DNA Contamination	PPS71596A
H07	N/A	SA_00104	RTC	Reverse Transcription Control	PPX63340A
H08	N/A	SA_00104	RTC	Reverse Transcription Control	PPX63340A
H09	N/A	SA_00104	RTC	Reverse Transcription Control	PPX63340A
H10	N/A	SA_00103	PPC	Positive PCR Control	PPX63339A
H11	N/A	SA_00103	PPC	Positive PCR Control	PPX63339A
H12	N/A	SA_00103	PPC	Positive PCR Control	PPX63339A

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## Related products

For optimal performance, RT<sup>2</sup> Profiler PCR Arrays should be used together with the RT<sup>2</sup> First Strand Kit for cDNA synthesis and RT2 SYBR<sup>®</sup> Green qPCR Mastermixes for PCR.

Product	Contents	Cat. no.
RT <sup>2</sup> First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT <sup>2</sup> SYBR Green qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with real-time cyclers that do not require a reference dye, including: Bio-Rad models CFX96, CFX384, DNA Engine Opticon 2; Bio-Rad/MJ Research Chromo4; Roche LightCycler 480 (96-well and 384-well); all other cyclers	330500
RT <sup>2</sup> SYBR Green ROX <sup>™</sup> qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Applied Biosystems models 5700, 7000, 7300, 7500 [Standard and FAST], 7700, 7900HT 96-well block [Standard and FAST] and 384-well block, StepOnePlus; Eppendorf Mastercycler ep realplex models 2, 2S, 4, 4S; Stratagene models Mx3000P, Mx3005P, Mx4000; Takara TP-800	330520
RT <sup>2</sup> SYBR Green Fluor qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Bio-Rad models iCycler, iQ5, MyiQ, MyiQ2	330510

\* Larger kit sizes available; please inquire.

RT<sup>2</sup> Profiler PCR Array products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

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