

RT² Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

Cow Mitochondrial Energy Metabolism

Cat. no. 330231 PABT-008ZA

For pathway expression analysis

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



Sample & Assay Technologies

Description

For further details, consult the *RT² Profiler PCR Array Handbook*.

Shipping and storage

RT² 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. RT² 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 RT² 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 *RT² Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
A	ATP12A	ATP4A	ATP4B	ATP5A1	ATP5B	ATP5C1	ATP5F1	ATP5G1	ATP5G2	ATP5G3	ATP5H	ATP5I
B	ATP5J	ATP5J2	ATP5O	ATP6V0A2	ATP6V0D2	ATP6V1C2	ATP6V1E2	ATP6V1G3	BCS1L	COX4I1	COX4I2	COX5A
C	COX5B	COX6A2	COX6B1	COX6B2	COX7A2	COX7A2L	COX7B	CYC1	LHPP	NDUFA10	NDUFA11	NDUFA2
D	NDUFA3	NDUFA4	NDUFA5	NDUFA6	NDUFA7	NDUFA8	NDUFA81	NDUFB10	NDUFB2	NDUFB3	NDUFB4	NDUFB5
E	NDUFB6	NDUFB7	NDUFB8	NDUFB9	NDUFC1	NDUFC2	NDUFS1	NDUFS2	NDUFS3	NDUFS4	NDUFS5	NDUFS6
F	NDUFS7	NDUFS8	NDUFV1	NDUFV2	NDUFV3	OXA1L	PPA1	PPA2	SDHA	SDHB	SDHC	SDHD
G	SLC25A15	SLC25A21	SLC25A22	UCP1	UCP2	UCP3	UQCRC11	UQCRC1	UQCRC2	UQCRCF1	UQCRCRH	UQCRCQ
H	ACTB	GAPDH	HPRT1	TBP	YWHAZ	BGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description	Assay
A01	N/A	XM_002691870	ATP12A	ATPase, H+ /K+ transporting, nongastric, alpha polypeptide	PPB09044A
A02	Bt.28236	NM_001144089	ATP4A	ATPase, H+ /K+ exchanging, alpha polypeptide	PPB07550A
A03	Bt.29440	NM_001206140	ATP4B	ATPase, H+ /K+ exchanging, beta polypeptide	PPB12837A
A04	Bt.7194	NM_174684	ATP5A1	ATP synthase, H+ transporting, mitochondrial F1 complex, alpha subunit 1, cardiac muscle	PPB01144A
A05	Bt.4431	NM_175796	ATP5B	ATP synthase, H+ transporting, mitochondrial F1 complex, beta polypeptide	PPB01422A
A06	Bt.20727	NM_001075136	ATP5C1	ATP synthase, H+ transporting, mitochondrial F1 complex, gamma polypeptide 1	PPB01416A
A07	Bt.3867	NM_001038501	ATP5F1	ATP synthase, H+ transporting, mitochondrial Fo complex, subunit B1	PPB01189A
A08	Bt.1242	NM_176649	ATP5G1	ATP synthase, H+ transporting, mitochondrial Fo complex, subunit C1 (subunit 9)	PPB01519A
A09	Bt.64851	NM_176613	ATP5G2	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit C2 (subunit 9)	PPB01470A
A10	Bt.49343	NM_001034692	ATP5G3	ATP synthase, H+ transporting, mitochondrial Fo complex, subunit C3 (subunit 9)	PPB11804A
A11	Bt.5029	NM_174724	ATP5H	ATP synthase, H+ transporting, mitochondrial Fo complex, subunit d	PPB01196A
A12	Bt.49173	NM_176639	ATP5I	ATP synthase, H+ transporting, mitochondrial Fo complex, subunit E	PPB01508A
B01	Bt.404	NM_174717	ATP5J	ATP synthase, H+ transporting, mitochondrial Fo complex, subunit F6	PPB01187A
B02	Bt.59381	NM_001113719	ATP5J2	ATP synthase, H+ transporting, mitochondrial Fo complex, subunit F2	PPB02934A
B03	Bt.49172	NM_174244	ATP5O	ATP synthase, H+ transporting, mitochondrial F1 complex, O subunit	PPB00560A
B04	Bt.16017	NM_176637	ATP6V0A2	ATPase, H+ transporting, lysosomal V0 subunit a2	PPB01506A
B05	Bt.10174	NM_001046101	ATP6V0D2	ATPase, H+ transporting, lysosomal 38kDa, V0 subunit d2	PPB05019A
B06	Bt.48590	NM_001083653	ATP6V1C2	ATPase, H+ transporting, lysosomal 42kDa, V1 subunit C2	PPB03639A
B07	Bt.50607	NM_001079613	ATP6V1E2	ATPase, H+ transporting, lysosomal 31kDa, V1 subunit E2	PPB11765A
B08	N/A	XM_002694234	ATP6V1G3	ATPase, H+ transporting, lysosomal 13kDa, V1 subunit G3	PPB12690A
B09	Bt.5278	NM_001015671	BCS1L	BCS1-like (S. cerevisiae)	PPB11550A
B10	Bt.16025	NM_001001439	COX4I1	Cytochrome c oxidase subunit IV isoform 1	PPB00236A
B11	Bt.30618	NM_001193186	COX4I2	Cytochrome c oxidase subunit IV isoform 2	PPB14259A
B12	Bt.55686	NM_001002891	COX5A	COX5A protein	PPB01885A
C01	Bt.87845	NM_001034046	COX5B	Cytochrome c oxidase subunit Vb	PPB01335A
C02	Bt.49093	NM_174522	COX6A2	Cytochrome c oxidase subunit VIa polypeptide 2	PPB00939A
C03	Bt.67150	NM_176675	COX6B1	Cytochrome c oxidase subunit VIb polypeptide 1	PPB16120A
C04	Bt.29868	NM_001012684	COX6B2	Cytochrome c oxidase subunit VIb testes-specific isoform	PPB01982A
C05	Bt.4970	NM_175807	COX7A2	Cytochrome c oxidase subunit VIIa polypeptide 2 (liver)	PPB01435A
C06	Bt.49046	NM_001034695	COX7A2L	Cytochrome c oxidase subunit VIIa polypeptide 2 like	PPB11831A
C07	Bt.91777	NM_175795	COX7B	Cytochrome c oxidase subunit VIIb	PPB16166A
C08	Bt.1808	NM_001038090	CYC1	Cytochrome c-1	PPB05257A
				Phosphorylsine phosphohistidine inorganic pyrophosphate	

Position	UniGene	GenBank	Symbol	Description	Assay
C09	Bt.3399	NM_001080912	LHPP	phosphatase	PPB09856A
C10	Bt.4473	NM_176655	NDUFA10	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 10, 42kDa	PPB01526A
C11	Bt.5723	NM_175718	NDUFA11	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 11, 14.7kDa	PPB01392A
C12	Bt.65	NM_175815	NDUFA2	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 2, 8kDa	PPB01444A
D01	Bt.66	NM_176659	NDUFA3	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 3, 9kDa	PPB01530A
D02	Bt.4819	NM_175820	NDUFA4	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 4, 9kDa	PPB01450A
D03	Bt.60600	NM_175829	NDUFA5	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 5, 13kDa	PPB01460A
D04	Bt.63	NM_175791	NDUFA6	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 6, 14kDa	PPB01418A
D05	Bt.20	NM_176658	NDUFA7	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 7, 14.5kDa	PPB01529A
D06	Bt.59	NM_175826	NDUFA8	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 8, 19kDa	PPB01456A
D07	Bt.321	NM_001040488	NDUFAB1	NADH dehydrogenase (ubiquinone) 1, alpha/beta subcomplex, 1, 8kDa	PPB01448A
D08	Bt.70	NM_175818	NDUFB10	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 10, 22kDa	PPB01447A
D09	Bt.60	NM_175828	NDUFB2	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 2, 8kDa	PPB01459A
D10	Bt.61	NM_176667	NDUFB3	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 3, 12kDa	PPB01538A
D11	Bt.49223	NM_175822	NDUFB4	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 4, 15kDa	PPB01452A
D12	Bt.71	NM_176656	NDUFB5	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 5, 16kDa	PPB01527A
E01	Bt.893	NM_175787	NDUFB6	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 6, 17kDa	PPB01413A
E02	Bt.64	NM_176660	NDUFB7	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 7, 18kDa	PPB01531A
E03	Bt.57711	NM_174667	NDUFB8	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 8, 19kDa	PPB01123A
E04	Bt.3117	NM_175783	NDUFB9	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 9, 22kDa	PPB01409A
E05	Bt.98783	NM_174564	NDUFC1	NADH dehydrogenase (ubiquinone) 1, subcomplex unknown, 1, 6kDa	PPB00988A
E06	Bt.64366	NM_176642	NDUFC2	NADH dehydrogenase (ubiquinone) 1, subcomplex unknown, 2, 14.5kDa	PPB01512A
E07	Bt.4777	NM_174820	NDUFS1	NADH dehydrogenase (ubiquinone) Fe-S protein 1, 75kDa (NADH-coenzyme Q reductase)	PPB01350A
E08	Bt.4475	NM_001075137	NDUFS2	NADH dehydrogenase (ubiquinone) Fe-S protein 2, 49kDa (NADH-coenzyme Q reductase)	PPB01443A
E09	Bt.1153	NM_174819	NDUFS3	NADH dehydrogenase (ubiquinone) Fe-S protein 3, 30kDa (NADH-coenzyme Q reductase)	PPB01349A
E10	Bt.58	NM_175800	NDUFS4	NADH dehydrogenase (ubiquinone) Fe-S protein 4, 18kDa (NADH-coenzyme Q reductase)	PPB01427A
E11	Bt.57	NM_176652	NDUFS5	NADH dehydrogenase (ubiquinone) Fe-S protein 5, 15kDa (NADH-coenzyme Q reductase)	PPB01523A
E12	Bt.56	NM_175810	NDUFS6	NADH dehydrogenase (ubiquinone) Fe-S protein 6, 13kDa (NADH-coenzyme Q reductase)	PPB01438A
F01	Bt.315	NM_001038022	NDUFS7	NADH dehydrogenase (ubiquinone) Fe-S protein 7, 20kDa (NADH-coenzyme Q reductase)	PPB01543A
F02	Bt.5483	NM_174818	NDUFS8	NADH dehydrogenase (ubiquinone) Fe-S protein 8, 23kDa (NADH-coenzyme Q reductase)	PPB01348A
F03	Bt.4072	NM_174808	NDUFV1	NADH dehydrogenase (ubiquinone) flavoprotein 1, 51kDa	PPB01337A
F04	Bt.88596	NM_174565	NDUFV2	NADH dehydrogenase (ubiquinone) flavoprotein 2, 24kDa	PPB00989A
F05	Bt.43863	NM_175830	NDUFV3	NADH dehydrogenase (ubiquinone) flavoprotein 3, 10kDa	PPB01463A
F06	Bt.49117	NM_001035335	OXA1L	Oxidase (cytochrome c) assembly 1-like	PPB07427A
F07	Bt.7870	NM_001075118	PPA1	Pyrophosphatase (inorganic) 1	PPB00013A
F08	Bt.58443	NM_001076396	PPA2	Pyrophosphatase (inorganic) 2	PPB13373A
F09	Bt.24449	NM_174178	SDHA	Succinate dehydrogenase complex, subunit A, flavoprotein (Fp)	PPB00460A
F10	Bt.13128	NM_001040483	SDHB	Succinate dehydrogenase complex, subunit B, iron sulfur (Ip)	PPB01291A
F11	Bt.48821	NM_175814	SDHC	Succinate dehydrogenase complex, subunit C, integral membrane protein, 15kDa	PPB01442A
F12	Bt.65279	NM_174179	SDHD	Succinate dehydrogenase complex, subunit D, integral membrane protein	PPB00461A
G01	Bt.98828	NM_001046326	SLC25A15	Solute carrier family 25 (mitochondrial carrier; ornithine transporter) member 15	PPB09335A
G02	Bt.14112	NM_001015587	SLC25A21	Solute carrier family 25 (mitochondrial oxodicarboxylate carrier), member 21	PPB05606A
G03	Bt.16050	NM_001075159	SLC25A22	Solute carrier family 25 (mitochondrial carrier: glutamate), member 22	PPB02063A
G04	Bt.507	NM_001166528	UCP1	Uncoupling protein 1 (mitochondrial, proton carrier)	PPB00507A
G05	Bt.5180	NM_001033611	UCP2	Uncoupling protein 2 (mitochondrial, proton carrier)	PPB00508A
G06	Bt.136	NM_174210	UCP3	Uncoupling protein 3 (mitochondrial, proton carrier)	PPB00509A
G07	Bt.5040	NM_174215	UQCRC1	Ubiquinol-cytochrome c reductase (6.4kD) subunit	PPB00516A
G08	Bt.23164	NM_174629	UQCRC1	UQCRC1 protein	PPB01067A
G09	Bt.27799	NM_174630	UQCRC2	Ubiquinol-cytochrome c reductase core protein II	PPB01068A
G10	Bt.265	NM_174813	UQCRCFS1	Ubiquinol-cytochrome c reductase, Rieske iron-sulfur polypeptide 1	PPB01342A
G11	Bt.27327	NM_001034745	UQCRCR	Ubiquinol-cytochrome c reductase hinge protein	PPB12678A
G12	Bt.49658	NM_174805	UQCRCQ	Low molecular mass ubiquinone-binding protein (9.5kD)	PPB01330A

Position	UniGene	GenBank	Symbol	Description	Assay
H01	Bt.14186	NM_173979	ACTB	Actin, beta	PPB00173A
H02	Bt.87389	NM_001034034	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase	PPB00298A
H03	Bt.49238	NM_001034035	HPRT1	Hypoxanthine phosphoribosyltransferase 1	PPB00330A
H04	Bt.22662	NM_001075742	TBP	TATA box binding protein	PPB06797A
H05	Bt.111451	NM_174814	YWHAZ	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide	PPB01343A
H06	N/A	SA_00137	BGDC	Cow Genomic DNA Contamination	PPB71596A
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

Related products

For optimal performance, RT² Profiler PCR Arrays should be used together with the RT² First Strand Kit for cDNA synthesis and RT² SYBR[®] Green qPCR Mastermixes for PCR.

Product	Contents	Cat. no.
RT ² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT ² 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 ² SYBR Green ROX [™] 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 ² 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.

RT² 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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