

QuantiNova® LNA® PCR Focus Panels (96-Well Format and 384-Well [4 x 96] Format)

Human Mitochondria

Cat. no. 249950 SBHS-087ZA

For study focus gene expression analysis

Shipping and storage

QuantiNova LNA PCR Focus Panels are shipped at ambient temperature. Immediately upon receipt, they should be stored at 2–8°C for short term storage or at –30°C to –15°C for long time storage. Under these conditions, all components are stable for at least 12 months.

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

For optimal performance, QuantiNova LNA PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova SYBR® Green PCR Kit (Mastermix) for PCR.

Panel layout (96-well): QuantiNova LNA PCR Focus Panel

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. Refer to the QuantiNova LNA PCR System Handbook at www.qiagen.com for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
A	AIFM2	AIP	BAK1	BBC3	BCL2	BCL2L1	BID	BNIP3	CDKN2A	COX10	COX18	CPT1B
B	CPT2	DNM1L	FIS1	TIMM10B	GRPEL1	HSP90AA1	HSPD1	IMMP1L	IMMP2L	LRPPRC	MFN1	MFN2
C	MIPEP	MPV17	MSTO1	MTX2	NEFL	OPA1	PMAIP1	RHOT1	RHOT2	SFN	SH3GLB1	SLC25A1
D	SLC25A10	SLC25A12	SLC25A13	SLC25A14	SLC25A15	SLC25A16	SLC25A17	SLC25A19	SLC25A2	SLC25A20	SLC25A21	SLC25A22
E	SLC25A23	SLC25A24	SLC25A25	SLC25A27	SLC25A3	SLC25A30	SLC25A31	SLC25A37	SLC25A4	SLC25A5	SOD1	SOD2
F	STARD3	TAZ	TIMM10	TIMM17A	TIMM17B	TIMM22	TIMM23	TIMM44	TIMM50	TIMM8A	TIMM8B	TIMM9
G	TOMM20	TOMM22	TOMM34	TOMM40	TOMM40L	TOMM70	TP53	TSPO	UCP1	UCP2	UCP3	UXT
H	ACTB	B2M	GAPDH	HRPT1	RPLP0	HGDC	QIC	QIC	QIC	PPC	PPC	PPC

Gene table: QuantiNova LNA PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	SBH0498200	ENST00000613322.4	AIFM2	ENSG00000042286	apoptosis inducing factor, mitochondria associated 2 Source HGNC Symbol Acc HGNC 21411
A02	SBH0631046	ENST00000279146.8	AIP	ENSG00000110711	aryl hydrocarbon receptor interacting protein Source HGNC Symbol Acc HGNC 358
A03	SBH1219780	ENST00000374467.4	BAK1	ENSG00000030110	BCL2 antagonist/killer 1 Source HGNC Symbol Acc HGNC 949
A04	SBH1219784	ENST00000341983.8	BBC3	ENSG00000105327	BCL2 binding component 3 Source HGNC Symbol Acc HGNC 17868
A05	SBH1219786	ENST00000398117.1	BCL2	ENSG00000171791	BCL2, apoptosis regulator Source HGNC Symbol Acc HGNC 990
A06	SBH0216029	ENST00000450273.1	BCL2L1	ENSG00000171552	BCL2 like 1 Source HGNC Symbol Acc HGNC 992
A07	SBH0641141	ENST00000622694.4	BID	ENSG00000015475	BH3 interacting domain death agonist Source HGNC Symbol Acc HGNC 1050
A08	SBH1219810	ENST00000540159.3	BNIP3	ENSG00000176171	BCL2 interacting protein 3 Source HGNC Symbol Acc HGNC 1084
A09	SBH0349548	ENST00000304494.9	CDKN2A	ENSG00000147889	cyclin dependent kinase inhibitor 2A Source HGNC Symbol Acc HGNC 1787
A10	SBH0467764	ENST00000261643.8	COX10	ENSG00000006695	cytochrome c oxidase assembly factor heme A farnesyltransferase COX10 Source HGNC Symbol Acc HGNC 2260
A11	SBH0174037	ENST00000295890.8	COX18	ENSG00000163626	cytochrome c oxidase assembly factor COX18 Source HGNC Symbol Acc HGNC 26801
A12	SBH0574504	ENST00000312108.11	CPT1B	ENSG00000205560	carnitine palmitoyltransferase 1B Source HGNC Symbol Acc HGNC 2329
B01	SBH1219910	ENST00000636891.1	CPT2	ENSG00000157184	carnitine palmitoyltransferase 2 Source HGNC Symbol Acc HGNC 2330
B02	SBH0393375	ENST00000452533.6	DNM1L	ENSG00000087470	dynamain 1 like Source HGNC Symbol Acc HGNC 2973
B03	SBH0278802	ENST00000435848.1	FIS1	ENSG000000214253	fission, mitochondrial 1 Source HGNC Symbol Acc HGNC 21689
B04	SBH0302184	ENST00000254616.11	TIMM10B	ENSG00000132286	translocase of inner mitochondrial membrane 10B Source HGNC Symbol Acc HGNC 4022
B05	SBH0028778	ENST00000264954.5	GRPEL1	ENSG00000109519	GrpE like 1, mitochondrial Source HGNC Symbol Acc HGNC 19696
B06	SBH0323386	ENST00000334701.11	HSP90AA1	ENSG00000080824	heat shock protein 90 alpha family class A member 1 Source HGNC Symbol Acc HGNC 5253
B07	SBH1220074	ENST00000338968.8	HSPD1	ENSG00000144381	heat shock protein family D (Hsp60) member 1 Source HGNC Symbol Acc HGNC 5261
B08	SBH0378884	ENST00000527184.5	IMMP1L	ENSG00000148950	inner mitochondrial membrane peptidase subunit 1 Source HGNC Symbol Acc HGNC 26317
B09	SBH0562489	ENST00000447215.5	IMMP2L	ENSG00000184903	inner mitochondrial membrane peptidase subunit 2 Source HGNC Symbol Acc HGNC 14598
B10	SBH0050222	ENST00000447246.1	LRPPRC	ENSG00000138095	leucine rich pentatricopeptide repeat containing Source HGNC Symbol Acc HGNC 15714
B11	SBH0020677	ENST00000467174.6	MFN1	ENSG00000171109	mitofusin 1 Source HGNC Symbol Acc HGNC 18262
B12	SBH0573198	ENST00000484391.5	MFN2	ENSG00000116688	mitofusin 2 Source HGNC Symbol Acc HGNC 16877
C01	SBH0470112	ENST00000382172.4	MIPEP	ENSG00000027001	mitochondrial intermediate peptidase Source HGNC Symbol Acc HGNC 7104
C02	SBH0138059	ENST00000380044.6	MPV17	ENSG00000115204	mitochondrial inner membrane protein MPV17 Source HGNC Symbol Acc HGNC 7224
C03	SBH0111298	ENST00000483734.5	MSTO1	ENSG00000125459	misato mitochondrial distribution and morphology regulator 1 Source HGNC Symbol Acc HGNC 29678
C04	SBH0001559	ENST00000420864.5	MTX2	ENSG00000128654	metaxin 2 Source HGNC Symbol Acc HGNC 7506
C05	SBH0127200	ENST00000619417.1	NEFL	ENSG00000277586	neurofilament light Source HGNC Symbol Acc HGNC 7739
C06	SBH0259607	ENST00000361828.7	OPA1	ENSG00000198836	OPA1, mitochondrial dynamin like GTPase Source HGNC Symbol Acc HGNC 8140
C07	SBH0088081	ENST00000316660.6	PMAIP1	ENSG00000141682	phorbol-12-myristate-13-acetate-induced protein 1 Source HGNC Symbol Acc HGNC 9108
C08	SBH0262351	ENST00000580392.5	RHOT1	ENSG00000126858	ras homolog family member T1 Source HGNC Symbol Acc HGNC 21168
C09	SBH0662056	ENST00000569943.6	RHOT2	ENSG00000140983	ras homolog family member T2 Source HGNC Symbol Acc HGNC 21169
C10	SBH0603665	ENST00000339276.6	SFN	ENSG00000175793	stratifin Source HGNC Symbol Acc HGNC 10773
		ENST00000535		ENSG000000	SH3 domain containing GRB2 like, endophilin B1 Source HGNC Symbol Acc

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH0529723	010.5	SH3GLB1	097033	HGNC 10833
C12	SBH0569248	ENST00000461267.1	SLC25A1	ENSG00000100075	solute carrier family 25 member 1 Source HGNC Symbol Acc HGNC 10979
D01	SBH0040166	ENST00000545862.5	SLC25A10	ENSG00000183048	solute carrier family 25 member 10 Source HGNC Symbol Acc HGNC 10980
D02	SBH0646268	ENST00000422440.7	SLC25A12	ENSG00000115840	solute carrier family 25 member 12 Source HGNC Symbol Acc HGNC 10982
D03	SBH0151182	ENST00000416240.6	SLC25A13	ENSG00000004864	solute carrier family 25 member 13 Source HGNC Symbol Acc HGNC 10983
D04	SBH0082199	ENST00000464184.5	SLC25A14	ENSG00000102078	solute carrier family 25 member 14 Source HGNC Symbol Acc HGNC 10984
D05	SBH0296535	ENST00000338625.9	SLC25A15	ENSG00000102743	solute carrier family 25 member 15 Source HGNC Symbol Acc HGNC 10985
D06	SBH0401537	ENST00000608053.1	SLC25A16	ENSG00000122912	solute carrier family 25 member 16 Source HGNC Symbol Acc HGNC 10986
D07	SBH0524645	ENST00000435456.7	SLC25A17	ENSG00000100372	solute carrier family 25 member 17 Source HGNC Symbol Acc HGNC 10987
D08	SBH0209593	ENST00000320362.7	SLC25A19	ENSG00000125454	solute carrier family 25 member 19 Source HGNC Symbol Acc HGNC 14409
D09	SBH0296589	ENST00000239451.6	SLC25A2	ENSG00000120329	solute carrier family 25 member 2 Source HGNC Symbol Acc HGNC 22921
D10	SBH0021297	ENST00000430379.5	SLC25A20	ENSG00000178537	solute carrier family 25 member 20 Source HGNC Symbol Acc HGNC 1421
D11	SBH0040309	ENST00000546428.2	SLC25A21	ENSG00000183032	solute carrier family 25 member 21 Source HGNC Symbol Acc HGNC 14411
D12	SBH0621631	ENST00000625752.2	SLC25A22	ENSG00000177542	solute carrier family 25 member 22 Source HGNC Symbol Acc HGNC 19954
E01	SBH0184990	ENST00000598908.5	SLC25A23	ENSG00000125648	solute carrier family 25 member 23 Source HGNC Symbol Acc HGNC 19375
E02	SBH0004549	ENST00000370041.4	SLC25A24	ENSG00000085491	solute carrier family 25 member 24 Source HGNC Symbol Acc HGNC 20662
E03	SBH0208179	ENST00000373064.9	SLC25A25	ENSG00000148339	solute carrier family 25 member 25 Source HGNC Symbol Acc HGNC 20663
E04	SBH0427679	ENST00000411689.6	SLC25A27	ENSG00000153291	solute carrier family 25 member 27 Source HGNC Symbol Acc HGNC 21065
E05	SBH0321813	ENST00000401722.7	SLC25A3	ENSG00000075415	solute carrier family 25 member 3 Source HGNC Symbol Acc HGNC 10989
E06	SBH0290050	ENST00000310862.11	SLC25A30	ENSG00000174032	solute carrier family 25 member 30 Source HGNC Symbol Acc HGNC 27371
E07	SBH0252009	ENST00000281154.6	SLC25A31	ENSG00000151475	solute carrier family 25 member 31 Source HGNC Symbol Acc HGNC 25319
E08	SBH0281640	ENST00000290075.10	SLC25A37	ENSG00000147454	solute carrier family 25 member 37 Source HGNC Symbol Acc HGNC 29786
E09	SBH0594083	ENST00000491736.1	SLC25A4	ENSG00000151729	solute carrier family 25 member 4 Source HGNC Symbol Acc HGNC 10990
E10	SBH0325974	ENST00000317881.9	SLC25A5	ENSG00000005022	solute carrier family 25 member 5 Source HGNC Symbol Acc HGNC 10991
E11	SBH0278498	ENST00000270142.10	SOD1	ENSG00000142168	superoxide dismutase 1 Source HGNC Symbol Acc HGNC 11179
E12	SBH1220414	ENST00000535561.5	SOD2	ENSG00000112096	superoxide dismutase 2 Source HGNC Symbol Acc HGNC 11180
F01	SBH0026620	ENST00000581894.5	STARD3	ENSG00000131748	STAR related lipid transfer domain containing 3 Source HGNC Symbol Acc HGNC 17579
F02	SBH0087006	ENST00000617701.5	TAZ	ENSG00000102125	tafazzin Source HGNC Symbol Acc HGNC 11577
F03	SBH0066470	ENST00000257245.9	TIMM10	ENSG00000134809	translocase of inner mitochondrial membrane 10 Source HGNC Symbol Acc HGNC 11814
F04	SBH0272800	ENST00000482943.1	TIMM17A	ENSG00000134375	translocase of inner mitochondrial membrane 17A Source HGNC Symbol Acc HGNC 17315
F05	SBH0551924	ENST00000490755.2	TIMM17B	ENSG00000126768	translocase of inner mitochondrial membrane 17B Source HGNC Symbol Acc HGNC 17310
F06	SBH0527896	ENST00000327158.5	TIMM22	ENSG00000177370	translocase of inner mitochondrial membrane 22 Source HGNC Symbol Acc HGNC 17317
F07	SBH0034576	ENST00000580018.4	TIMM23	ENSG00000265354	translocase of inner mitochondrial membrane 23 Source HGNC Symbol Acc HGNC 17312
F08	SBH0230944	ENST00000270538.8	TIMM44	ENSG00000104980	translocase of inner mitochondrial membrane 44 Source HGNC Symbol Acc HGNC 17316
F09	SBH0665040	ENST00000602265.5	TIMM50	ENSG00000105197	translocase of inner mitochondrial membrane 50 Source HGNC Symbol Acc HGNC 23656
F10	SBH0036315	ENST00000480575.2	TIMM8A	ENSG00000126953	translocase of inner mitochondrial membrane 8A Source HGNC Symbol Acc HGNC 11817

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH0206305	ENST00000509359.6	TIMM8B	ENSG00000150779	translocase of inner mitochondrial membrane 8 homolog B Source HGNC Symbol Acc HGNC 11818
F12	SBH0510217	ENST00000395159.7	TIMM9	ENSG00000100575	translocase of inner mitochondrial membrane 9 Source HGNC Symbol Acc HGNC 11819
G01	SBH0486395	ENST00000366607.5	TOMM20	ENSG00000173726	translocase of outer mitochondrial membrane 20 Source HGNC Symbol Acc HGNC 20947
G02	SBH0421113	ENST00000492561.1	TOMM22	ENSG00000100216	translocase of outer mitochondrial membrane 22 Source HGNC Symbol Acc HGNC 18002
G03	SBH0419161	ENST00000372813.4	TOMM34	ENSG00000025772	translocase of outer mitochondrial membrane 34 Source HGNC Symbol Acc HGNC 15746
G04	SBH0161791	ENST00000592041.1	TOMM40	ENSG00000130204	translocase of outer mitochondrial membrane 40 Source NCBI gene Acc 10452
G05	SBH0174327	ENST00000492482.5	TOMM40L	ENSG00000158882	translocase of outer mitochondrial membrane 40 like Source HGNC Symbol Acc HGNC 25756
G06	SBH0241348	ENST00000492171.1	TOMM70	ENSG00000154174	translocase of outer mitochondrial membrane 70 Source HGNC Symbol Acc HGNC 11985
G07	SBH1220486	ENST00000445888.6	TP53	ENSG00000141510	tumor protein p53 Source HGNC Symbol Acc HGNC 11998
G08	SBH0289589	ENST00000329563.8	TSPO	ENSG00000100300	translocator protein Source HGNC Symbol Acc HGNC 1158
G09	SBH0666067	ENST00000262999.4	UCP1	ENSG00000109424	uncoupling protein 1 Source HGNC Symbol Acc HGNC 12517
G10	SBH1220503	ENST00000536983.5	UCP2	ENSG00000175567	uncoupling protein 2 Source HGNC Symbol Acc HGNC 12518
G11	SBH0224850	ENST00000426995.2	UCP3	ENSG00000175564	uncoupling protein 3 Source HGNC Symbol Acc HGNC 12519
G12	SBH0259792	ENST00000485641.5	UXT	ENSG00000126756	ubiquitously expressed prefoldin like chaperone Source HGNC Symbol Acc HGNC 12641
H01	SBH1220543	ENST00000646664.1	ACTB	ENSG00000075624	actin beta Source HGNC Symbol Acc HGNC 132
H02	SBH1220550	ENST00000558401.6	B2M	ENSG00000166710	beta-2-microglobulin Source HGNC Symbol Acc HGNC 914
H03	SBH1220545	ENST00000396861.5	GAPDH	ENSG00000111640	glyceraldehyde-3-phosphate dehydrogenase Source HGNC Symbol Acc HGNC 4141
H04	SBH1220546	ENST00000298556.8	HPRT1	ENSG00000165704	hypoxanthine phosphoribosyltransferase 1 Source HGNC Symbol Acc HGNC 5157
H05	SBH1220553	ENST00000546989.5	RPLP0	ENSG00000089157	ribosomal protein lateral stalk subunit P0 Source HGNC Symbol Acc HGNC 10371
H06	SBH1218553	Sybr_HGDC	HGDC	Sybr_HGDC	Human Genomic DNA Contamination
H07	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H08	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H09	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H10	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control
H11	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control
H12	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control



Related products

Product	Contents	Cat. no.
QuantiNova LNA PCR QC Panel	These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats	249940
QuantiNova Reverse Transcription Kit (10)*	For 10 x 20 μ l reactions: 20 μ l 8x gDNA Removal Mix, 10 μ l Reverse Transcription Enzyme, 40 μ l Reverse Transcription Mix (containing RT primers), 20 μ l Internal Control RNA, 1.9 ml RNase-Free Water	205410
QuantiNova SYBR Green RT-PCR Kit (100)*	For 100 x 20 μ l reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 μ l QuantiNova SYBR Green RT Mix, 20 μ l Internal Control RNA, 500 μ l Yellow Template Dilution Buffer, 250 μ l ROX Reference Dye, 1.9 μ l RNase-Free Water	208152
QuantiNova SYBR Green PCR Kit (100)*	For 100 x 20 μ l reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 μ l QuantiNova Yellow Template Dilution Buffer, 250 μ l QN ROX Reference Dye, 1.9 ml Water	208052

*Larger kit sizes available.

The QuantiNova LNA PCR Focus Panels are intended for molecular biology applications. These products are not intended for the diagnosis, prevention or treatment of a disease.

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