

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

## Human Diabetes

Cat. no. 249950 SBHS-023ZA

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](http://www.qiagen.com) for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
A	ABCC8	ACE	ACLY	ADRB3	AGT	AKT2	AQP2	CCL5	CCR2	CD28	CEACAM1	CEBPA
B	CTLA4	DUSP4	ENPP1	FBP1	FOXC2	FOXG1	FOXO3	G6PC	G6PD	GCG	GCGR	GCK
C	GLP1R	GPD1	GSK3B	HMOX1	HNF1B	HNF4A	ICAM1	IDE	IFNG	IGFBP5	IKKB	IL10
D	IL12B	IL4R	IL6	INPP1	INS	INSR	IRS1	IRS2	MAPK14	MAPK8	ME1	NEUROD1
E	NFKB1	NIX2-1	NOS3	NRF1	NSF	PARP1	PDX1	PIK3C2B	PIK3CD	PIK3R1	PPARA	PPARG
F	PPARGC1A	PPARGC1B	PRKAA1	PRKAG2	PRKCB	PTPN1	PYGL	RAB4A	RETN	SELL	SLC2A4	SNAP23
G	SNAP25	SREBF1	STX4	STXBP1	STXBP2	TGFB1	TNF	TNFRSF1A	TRIB3	VAMP3	VAPA	VEGFA
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	SBH0241527	ENST00000643562.1	ABCC8	ENSG00000006071	ATP binding cassette subfamily C member 8 Source HGNC Symbol Acc HGNC 59
A02	SBH1219717	ENST00000428043.5	ACE	ENSG00000159640	angiotensin I converting enzyme Source HGNC Symbol Acc HGNC 2707
A03	SBH1219718	ENST00000590770.5	ACLY	ENSG00000131473	ATP citrate lyase Source HGNC Symbol Acc HGNC 115
A04	SBH0064559	ENST00000345060.5	ADRB3	ENSG00000188778	adrenoceptor beta 3 Source HGNC Symbol Acc HGNC 288
A05	SBH1219729	ENST00000366667.5	AGT	ENSG00000135744	angiotensinogen Source HGNC Symbol Acc HGNC 333
A06	SBH0364428	ENST00000492463.6	AKT2	ENSG00000105221	AKT serine/threonine kinase 2 Source HGNC Symbol Acc HGNC 392
A07	SBH0594943	ENST00000199280.3	AQP2	ENSG00000167580	aquaporin 2 Source HGNC Symbol Acc HGNC 634
A08	SBH1219840	ENST00000603197.6	CCL5	ENSG00000271503	C-C motif chemokine ligand 5 Source HGNC Symbol Acc HGNC 10632
A09	SBH0387563	ENST00000445132.2	CCR2	ENSG00000121807	C-C motif chemokine receptor 2 Source HGNC Symbol Acc HGNC 1603
A10	SBH0430835	ENST00000458610.6	CD28	ENSG00000178562	CD28 molecule Source HGNC Symbol Acc HGNC 1653
A11	SBH0459670	ENST00000403444.7	CEACAM1	ENSG00000079385	carcinoembryonic antigen related cell adhesion molecule 1 Source HGNC Symbol Acc HGNC 1814
A12	SBH0261466	ENST00000498907.3	CEBPA	ENSG00000245848	CCAAT enhancer binding protein alpha Source HGNC Symbol Acc HGNC 1833
B01	SBH0671849	ENST00000472206.1	CTLA4	ENSG00000163599	cytotoxic T-lymphocyte associated protein 4 Source HGNC Symbol Acc HGNC 2505
B02	SBH0214356	ENST00000240100.7	DUSP4	ENSG00000120875	dual specificity phosphatase 4 Source HGNC Symbol Acc HGNC 3070
B03	SBH0473963	ENST00000650437.1	ENPP1	ENSG00000197594	ectonucleotide pyrophosphatase/phosphodiesterase 1 Source HGNC Symbol Acc HGNC 3356
B04	SBH0551904	ENST00000375326.8	FBP1	ENSG00000165140	fructose-bisphosphatase 1 Source HGNC Symbol Acc HGNC 3606
B05	SBH1220006	ENST00000320354.6	FOXC2	ENSG00000176692	forkhead box C2 Source HGNC Symbol Acc HGNC 3801
B06	SBH0366035	ENST00000637220.1	FOXG1	ENSG00000176165	forkhead box G1 Source HGNC Symbol Acc HGNC 3811
B07	SBH0423236	ENST00000376199.7	FOXP3	ENSG00000049768	forkhead box P3 Source HGNC Symbol Acc HGNC 6106
B08	SBH0049367	ENST00000592383.5	G6PC	ENSG00000131482	glucose-6-phosphatase catalytic subunit Source HGNC Symbol Acc HGNC 4056
B09	SBH0586368	ENST00000621232.5	G6PD	ENSG00000160211	glucose-6-phosphate dehydrogenase Source HGNC Symbol Acc HGNC 4057
B10	SBH0328879	ENST00000497568.1	GCG	ENSG00000115263	glucagon Source HGNC Symbol Acc HGNC 4191
B11	SBH0344353	ENST00000573428.1	GCGR	ENSG00000215644	glucagon receptor Source HGNC Symbol Acc HGNC 4192
B12	SBH1220024	ENST00000616242.4	GCK	ENSG00000106633	glucokinase Source HGNC Symbol Acc HGNC 4195
C01	SBH0033219	ENST00000373256.5	GLP1R	ENSG00000112164	glucagon like peptide 1 receptor Source HGNC Symbol Acc HGNC 4324
C02	SBH0000085	ENST00000548152.1	GPD1	ENSG00000167588	glycerol-3-phosphate dehydrogenase 1 Source HGNC Symbol Acc HGNC 4455
C03	SBH0579883	ENST00000316626.5	GSK3B	ENSG00000082701	glycogen synthase kinase 3 beta Source HGNC Symbol Acc HGNC 4617
C04	SBH1220067	ENST00000216117.9	HMOX1	ENSG00000100292	heme oxygenase 1 Source HGNC Symbol Acc HGNC 5013
C05	SBH0568375	ENST00000617811.5	HNF1B	ENSG00000275410	HNF1 homeobox B Source HGNC Symbol Acc HGNC 11630
C06	SBH0483648	ENST00000609795.5	HNF4A	ENSG00000101076	hepatocyte nuclear factor 4 alpha Source HGNC Symbol Acc HGNC 5024
C07	SBH1220076	ENST00000264832.8	ICAM1	ENSG00000090339	intercellular adhesion molecule 1 Source HGNC Symbol Acc HGNC 5344
C08	SBH0500078	ENST00000496903.5	IDE	ENSG00000119912	insulin degrading enzyme Source HGNC Symbol Acc HGNC 5381
C09	SBH1220090	ENST00000229135.4	IFNG	ENSG00000111537	interferon gamma Source HGNC Symbol Acc HGNC 5438
C10	SBH1220094	ENST00000233813.5	IGFBP5	ENSG00000115461	insulin like growth factor binding protein 5 Source HGNC Symbol Acc HGNC 5474
		ENST00000520		ENSG000000	inhibitor of nuclear factor kappa B kinase subunit beta Source HGNC Symbol

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH0241248	810.6	IKBKB	104365	Acc HGNC 5960
C12	SBH1220095	ENST0000042357.1	IL10	ENSG00000136634	interleukin 10 Source HGNC Symbol Acc HGNC 5962
D01	SBH1220099	ENST00000231228.2	IL12B	ENSG00000113302	interleukin 12B Source HGNC Symbol Acc HGNC 5970
D02	SBH0492526	ENST00000565915.5	IL4R	ENSG00000077238	interleukin 4 receptor Source HGNC Symbol Acc HGNC 6015
D03	SBH1220111	ENST00000401630.7	IL6	ENSG00000136244	interleukin 6 Source HGNC Symbol Acc HGNC 6018
D04	SBH0193025	ENST00000298229.7	INPPL1	ENSG00000165458	inositol polyphosphate phosphatase like 1 Source HGNC Symbol Acc HGNC 6080
D05	SBH0403664	ENST00000250971.7	INS	ENSG00000254647	insulin Source HGNC Symbol Acc HGNC 6081
D06	SBH0198962	ENST00000600492.1	INSR	ENSG00000171105	insulin receptor Source HGNC Symbol Acc HGNC 6091
D07	SBH0130188	ENST00000305123.5	IRS1	ENSG00000169047	insulin receptor substrate 1 Source HGNC Symbol Acc HGNC 6125
D08	SBH0069279	ENST00000375856.5	IRS2	ENSG00000185950	insulin receptor substrate 2 Source HGNC Symbol Acc HGNC 6126
D09	SBH0102441	ENST00000229795.7	MAPK14	ENSG00000112062	mitogen-activated protein kinase 14 Source HGNC Symbol Acc HGNC 6876
D10	SBH0294318	ENST00000395611.7	MAPK8	ENSG00000107643	mitogen-activated protein kinase 8 Source HGNC Symbol Acc HGNC 6881
D11	SBH0005060	ENST00000369705.4	ME1	ENSG00000065833	malic enzyme 1 Source HGNC Symbol Acc HGNC 6983
D12	SBH0212925	ENST00000295108.3	NEUROD1	ENSG00000162992	neuronal differentiation 1 Source HGNC Symbol Acc HGNC 7762
E01	SBH1220264	ENST00000651197.1	NFKB1	ENSG00000109320	nuclear factor kappa B subunit 1 Source HGNC Symbol Acc HGNC 7794
E02	SBH0031355	ENST00000354822.6	NKX2-1	ENSG00000136352	NK2 homeobox 1 Source HGNC Symbol Acc HGNC 11825
E03	SBH1220272	ENST00000297494.8	NOS3	ENSG00000164867	nitric oxide synthase 3 Source HGNC Symbol Acc HGNC 7876
E04	SBH0249320	ENST00000393230.6	NRF1	ENSG00000106459	nuclear respiratory factor 1 Source HGNC Symbol Acc HGNC 7996
E05	SBH0108624	ENST00000571172.5	NSF	ENSG00000073969	N-ethylmaleimide sensitive factor, vesicle fusing ATPase Source HGNC Symbol Acc HGNC 8016
E06	SBH1220289	ENST00000366794.10	PARP1	ENSG00000143799	poly(ADP-ribose) polymerase 1 Source HGNC Symbol Acc HGNC 270
E07	SBH0232543	ENST00000381033.5	PDX1	ENSG00000139515	pancreatic and duodenal homeobox 1 Source HGNC Symbol Acc HGNC 6107
E08	SBH0023778	ENST00000424712.6	PIK3C2B	ENSG00000133056	phosphatidylinositol-4-phosphate 3-kinase catalytic subunit type 2 beta Source HGNC Symbol Acc HGNC 8972
E09	SBH0495005	ENST00000536656.5	PIK3CD	ENSG00000171608	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit delta Source HGNC Symbol Acc HGNC 8977
E10	SBH0560623	ENST00000518813.5	PIK3R1	ENSG00000145675	phosphoinositide-3-kinase regulatory subunit 1 Source HGNC Symbol Acc HGNC 8979
E11	SBH1220322	ENST00000407236.5	PPARA	ENSG00000186951	peroxisome proliferator activated receptor alpha Source HGNC Symbol Acc HGNC 9232
E12	SBH0521265	ENST00000652522.1	PPARG	ENSG00000132170	peroxisome proliferator activated receptor gamma Source HGNC Symbol Acc HGNC 9236
F01	SBH0648879	ENST00000506055.5	PPARGC1A	ENSG00000109819	PPARG coactivator 1 alpha Source HGNC Symbol Acc HGNC 9237
F02	SBH0295595	ENST00000309241.10	PPARGC1B	ENSG00000155846	PPARG coactivator 1 beta Source HGNC Symbol Acc HGNC 30022
F03	SBH1220332	ENST00000397128.6	PRKAA1	ENSG00000132356	protein kinase AMP-activated catalytic subunit alpha 1 Source HGNC Symbol Acc HGNC 9376
F04	SBH0170149	ENST00000652136.1	PRKAG2	ENSG00000106617	protein kinase AMP-activated non-catalytic subunit gamma 2 Source HGNC Symbol Acc HGNC 9386
F05	SBH0521170	ENST00000472066.1	PRKCB	ENSG00000166501	protein kinase C beta Source HGNC Symbol Acc HGNC 9395
F06	SBH0048297	ENST00000541713.5	PTPN1	ENSG00000196396	protein tyrosine phosphatase, non-receptor type 1 Source HGNC Symbol Acc HGNC 9642
F07	SBH1220349	ENST00000544180.6	PYGL	ENSG00000100504	glycogen phosphorylase L Source HGNC Symbol Acc HGNC 9725
F08	SBH1217036	ENST00000618010.4	RAB4A	ENSG00000168118	RAB4A, member RAS oncogene family Source HGNC Symbol Acc HGNC 9781
F09	SBH0623598	ENST00000629642.1	RETN	ENSG00000104918	resistin Source HGNC Symbol Acc HGNC 20389
F10	SBH0011028	ENST00000236147.5	SELL	ENSG00000188404	selectin L Source HGNC Symbol Acc HGNC 10720

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH0509274	ENST00000424875.2	SLC2A4	ENSG00000181856	solute carrier family 2 member 4 Source HGNC Symbol Acc HGNC 11009
F12	SBH0480677	ENST00000349777.5	SNAP23	ENSG00000092531	synaptosome associated protein 23 Source HGNC Symbol Acc HGNC 11131
G01	SBH0261658	ENST00000495883.1	SNAP25	ENSG00000132639	synaptosome associated protein 25 Source HGNC Symbol Acc HGNC 11132
G02	SBH0652491	ENST00000423161.3	SREBF1	ENSG00000072310	sterol regulatory element binding transcription factor 1 Source HGNC Symbol Acc HGNC 11289
G03	SBH0557639	ENST00000313843.8	STX4	ENSG00000103496	syntaxin 4 Source HGNC Symbol Acc HGNC 11439
G04	SBH0126557	ENST00000650920.1	STXBP1	ENSG00000136854	syntaxin binding protein 1 Source HGNC Symbol Acc HGNC 11444
G05	SBH0531266	ENST00000599737.5	STXBP2	ENSG00000076944	syntaxin binding protein 2 Source HGNC Symbol Acc HGNC 11445
G06	SBH1220443	ENST00000598758.5	TGFB1	ENSG00000105329	transforming growth factor beta 1 Source NCBI gene Acc 7040
G07	SBH1220471	ENST00000449264.3	TNF	ENSG00000232810	tumor necrosis factor Source HGNC Symbol Acc HGNC 11892
G08	SBH0080951	ENST00000162749.6	TNFRSF1A	ENSG00000067182	TNF receptor superfamily member 1A Source HGNC Symbol Acc HGNC 11916
G09	SBH0518825	ENST00000449710.5	TRIB3	ENSG00000101255	tribbles pseudokinase 3 Source HGNC Symbol Acc HGNC 16228
G10	SBH0174021	ENST00000054666.11	VAMP3	ENSG00000049245	vesicle associated membrane protein 3 Source HGNC Symbol Acc HGNC 12644
G11	SBH0056067	ENST00000583475.1	VAPA	ENSG00000101558	VAMP associated protein A Source HGNC Symbol Acc HGNC 12648
G12	SBH0420322	ENST00000425836.6	VEGFA	ENSG00000112715	vascular endothelial growth factor A Source HGNC Symbol Acc HGNC 12680
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 $\mu$ l reactions: 20 $\mu$ l 8x gDNA Removal Mix, 10 $\mu$ l Reverse Transcription Enzyme, 40 $\mu$ l Reverse Transcription Mix (containing RT primers), 20 $\mu$ l Internal Control RNA, 1.9 ml RNase-Free Water	205410
QuantiNova SYBR Green RT-PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 $\mu$ l QuantiNova SYBR Green RT Mix, 20 $\mu$ l Internal Control RNA, 500 $\mu$ l Yellow Template Dilution Buffer, 250 $\mu$ l ROX Reference Dye, 1.9 $\mu$ l RNase-Free Water	208152
QuantiNova SYBR Green PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 $\mu$ l QuantiNova Yellow Template Dilution Buffer, 250 $\mu$ 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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