

# QuantiNova® LNA® PCR Focus Panels (Rotor-Gene® Format)

## Human Embryonic Stem Cells

Cat. no. 249950 SBHS-081ZR

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 (Rotor-Gene): QuantiNova LNA PCR Focus Panel

The 96 real-time assays in the Rotor-Gene format are located in wells 1–96 of the Rotor-Disc® (plate A1–A12=Rotor-Disc 1–12, plate B1–B12=Rotor-Disc 13–24, etc.). To maintain data analysis compatibility, wells 97–100 do not contain real-time assays but will contain master mix to account for weight balance. 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	ACTA2	AICDA	ALB	ALPL	CCNA2	CD44	CDC42	CDK1	CHD1	CHD7	CNOT3	DES
B	DPPA2	DPPA3	DPPA4	DPPA5	EN2	ENG	ESRRB	ETV2	FGF2	FGF5	FLII	GATA1
C	GATA2	GATA6	GDF3	GFAP	GSC	HAND1	HNF4A	HSPA9	ISL1	KAT5	KLF4	LIN28A
D	MEIS1	MESP1	MIXL1	MYBL2	MYC	MYOD1	NANOG	NCAM1	NES	NIKX2-5	NR0B1	NRSA2
E	NR6A1	NTSE	OLIG2	OTX2	PAF1	PAX6	POU5F1	PRDM14	RIF1	SALL4	SCN1A	SMAD1
F	SMAD2	SMAD3	SOX15	SOX17	SOX2	SOX3	SOX7	STAT3	TBXT	TAGLN	TAL1	TAT
G	TBX3	TCF3	TCL1A	TGDF1	TEK	TERT	THAP11	THY1	TRIM28	UTF1	ZFP42	ZFX
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	SBH0247260	ENST00000224784.10	ACTA2	ENSG00000107796	actin, alpha 2, smooth muscle, aorta Source HGNC Symbol Acc HGNC 130
A02	SBH0191605	ENST00000544516.5	AICDA	ENSG00000111732	activation induced cytidine deaminase Source HGNC Symbol Acc HGNC 13203
A03	SBH1219733	ENST00000621628.4	ALB	ENSG00000163631	albumin Source HGNC Symbol Acc HGNC 399
A04	SBH0499378	ENST00000374832.5	ALPL	ENSG00000162551	alkaline phosphatase, biomineralization associated Source HGNC Symbol Acc HGNC 438
A05	SBH0652713	ENST00000274026.10	CCNA2	ENSG00000145386	cyclin A2 Source HGNC Symbol Acc HGNC 1578
A06	SBH0074994	ENST00000428726.7	CD44	ENSG00000265508	CD44 molecule (Indian blood group) Source HGNC Symbol Acc HGNC 1681
A07	SBH0651826	ENST00000651171.1	CDC42	ENSG00000070831	cell division cycle 42 Source HGNC Symbol Acc HGNC 1736
A08	SBH0229893	ENST00000395284.7	CDK1	ENSG00000170312	cyclin dependent kinase 1 Source HGNC Symbol Acc HGNC 1722
A09	SBH0328822	ENST00000505657.1	CHD1	ENSG00000153922	chromodomain helicase DNA binding protein 1 Source HGNC Symbol Acc HGNC 1915
A10	SBH0223484	ENST00000528280.1	CHD7	ENSG00000171316	chromodomain helicase DNA binding protein 7 Source HGNC Symbol Acc HGNC 20626
A11	SBH0323158	ENST00000221232.11	CNOT3	ENSG00000088038	CCR4-NOT transcription complex subunit 3 Source HGNC Symbol Acc HGNC 7879
A12	SBH0113006	ENST00000477226.5	DES	ENSG00000175084	desmin Source HGNC Symbol Acc HGNC 2770
B01	SBH0450636	ENST00000478945.1	DPPA2	ENSG00000163530	developmental pluripotency associated 2 Source HGNC Symbol Acc HGNC 19197
B02	SBH0262814	ENST00000345088.3	DPPA3	ENSG00000187569	developmental pluripotency associated 3 Source HGNC Symbol Acc HGNC 19199
B03	SBH0636001	ENST00000477303.1	DPPA4	ENSG00000121570	developmental pluripotency associated 4 Source HGNC Symbol Acc HGNC 19200
B04	SBH0231015	ENST00000370370.4	DPPA5	ENSG00000203909	developmental pluripotency associated 5 Source HGNC Symbol Acc HGNC 19201
B05	SBH0186945	ENST00000297375.4	EN2	ENSG00000164778	engrailed homeobox 2 Source HGNC Symbol Acc HGNC 3343
B06	SBH1219975	ENST00000480266.5	ENG	ENSG00000106991	endoglin Source HGNC Symbol Acc HGNC 3349
B07	SBH0036853	ENST00000505752.6	ESRRB	ENSG00000119715	estrogen related receptor beta Source HGNC Symbol Acc HGNC 3473
B08	SBH0374128	ENST00000402764.6	ETV2	ENSG00000105672	ETS variant 2 Source HGNC Symbol Acc HGNC 3491
B09	SBH1220000	ENST00000264498.7	FGF2	ENSG00000138685	fibroblast growth factor 2 Source HGNC Symbol Acc HGNC 3676
B10	SBH0225015	ENST00000312465.11	FGF5	ENSG00000138675	fibroblast growth factor 5 Source HGNC Symbol Acc HGNC 3683
B11	SBH0046353	ENST00000496727.1	FLII	ENSG00000177731	FLII, actin remodeling protein Source HGNC Symbol Acc HGNC 3750
B12	SBH0536812	ENST00000651144.1	GATA1	ENSG00000102145	GATA binding protein 1 Source HGNC Symbol Acc HGNC 4170
C01	SBH0082748	ENST00000487848.5	GATA2	ENSG00000179348	GATA binding protein 2 Source HGNC Symbol Acc HGNC 4171
C02	SBH0297185	ENST00000269216.8	GATA6	ENSG00000141448	GATA binding protein 6 Source HGNC Symbol Acc HGNC 4174
C03	SBH1220026	ENST00000329913.4	GDF3	ENSG00000184344	growth differentiation factor 3 Source HGNC Symbol Acc HGNC 4218
C04	SBH0011470	ENST00000639277.1	GFAP	ENSG00000131095	glial fibrillary acidic protein Source HGNC Symbol Acc HGNC 4235
C05	SBH1220040	ENST00000238558.4	GSC	ENSG00000133937	goosecoid homeobox Source HGNC Symbol Acc HGNC 4612
C06	SBH0331125	ENST00000231121.3	HAND1	ENSG00000113196	heart and neural crest derivatives expressed 1 Source HGNC Symbol Acc HGNC 4807
C07	SBH0483648	ENST00000609795.5	HNF4A	ENSG00000101076	hepatocyte nuclear factor 4 alpha Source HGNC Symbol Acc HGNC 5024
C08	SBH0281690	ENST00000649126.1	HSPA9	ENSG00000113013	heat shock protein family A (Hsp70) member 9 Source HGNC Symbol Acc HGNC 5244
C09	SBH0269954	ENST00000505475.3	ISL1	ENSG00000016082	ISL LIM homeobox 1 Source HGNC Symbol Acc HGNC 6132
C10	SBH0012827	ENST00000377046.7	KAT5	ENSG00000172977	lysine acetyltransferase 5 Source HGNC Symbol Acc HGNC 5275
		ENST00000497		ENSG000000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH0614186	048.5	KLF4	136826	Kruppel like factor 4 Source HGNC Symbol Acc HGNC 6348
C12	SBH0644769	ENST00000254 231.4	LIN28A	ENSG00000 131914	lin-28 homolog A Source HGNC Symbol Acc HGNC 15986
D01	SBH0108816	ENST00000488 550.5	MEIS1	ENSG00000 143995	Meis homeobox 1 Source HGNC Symbol Acc HGNC 7000
D02	SBH0263807	ENST00000300 057.4	MESP1	ENSG00000 166823	mesoderm posterior bHLH transcription factor 1 Source HGNC Symbol Acc HGNC 29658
D03	SBH0542215	ENST00000557 734.1	MIXL1	ENSG00000 185155	Mix paired-like homeobox Source HGNC Symbol Acc HGNC 13363
D04	SBH0460927	ENST00000396 863.8	MYBL2	ENSG00000 101057	MYB proto-oncogene like 2 Source HGNC Symbol Acc HGNC 7548
D05	SBH0426145	ENST00000524 013.1	MYC	ENSG00000 136997	MYC proto-oncogene, bHLH transcription factor Source HGNC Symbol Acc HGNC 7553
D06	SBH0342665	ENST00000250 003.4	MYOD1	ENSG00000 129152	myogenic differentiation 1 Source HGNC Symbol Acc HGNC 7611
D07	SBH1225384	ENST00000229 307.9	NANOG	ENSG00000 111704	Nanog homeobox Source HGNC Symbol Acc HGNC 20857
D08	SBH1220236	ENST00000618 266.4	NCAM1	ENSG00000 149294	neural cell adhesion molecule 1 Source HGNC Symbol Acc HGNC 7656
D09	SBH0585490	ENST00000368 223.4	NES	ENSG00000 132688	nestin Source HGNC Symbol Acc HGNC 7756
D10	SBH0461083	ENST00000521 848.1	NKX2-5	ENSG00000 183072	NK2 homeobox 5 Source HGNC Symbol Acc HGNC 2488
D11	SBH0152990	ENST00000378 963.1	NROB1	ENSG00000 169297	nuclear receptor subfamily 0 group B member 1 Source HGNC Symbol Acc HGNC 7960
D12	SBH0495051	ENST00000236 914.7	NR5A2	ENSG00000 116833	nuclear receptor subfamily 5 group A member 2 Source HGNC Symbol Acc HGNC 7984
E01	SBH0671762	ENST00000416 460.6	NR6A1	ENSG00000 148200	nuclear receptor subfamily 6 group A member 1 Source HGNC Symbol Acc HGNC 7985
E02	SBH0237971	ENST00000437 581.1	NT5E	ENSG00000 135318	5 -nucleotidase ecto Source HGNC Symbol Acc HGNC 8021
E03	SBH0642856	ENST00000333 337.3	OLIG2	ENSG00000 205927	oligodendrocyte transcription factor 2 Source HGNC Symbol Acc HGNC 9398
E04	SBH0166045	ENST00000554 788.5	OTX2	ENSG00000 165588	orthodenticle homeobox 2 Source HGNC Symbol Acc HGNC 8522
E05	SBH0240407	ENST00000595 564.5	PAF1	ENSG00000 006712	PAF1 homolog, Paf1/RNA polymerase II complex component Source HGNC Symbol Acc HGNC 25459
E06	SBH0042496	ENST00000533 333.5	PAX6	ENSG00000 007372	paired box 6 Source HGNC Symbol Acc HGNC 8620
E07	SBH1225387	ENST00000513 407.1	POU5F1	ENSG00000 204531	POU class 5 homeobox 1 Source HGNC Symbol Acc HGNC 9221
E08	SBH0238535	ENST00000276 594.2	PRDM14	ENSG00000 147596	PR/SET domain 14 Source HGNC Symbol Acc HGNC 14001
E09	SBH0244509	ENST00000414 861.6	RIF1	ENSG00000 080345	replication timing regulatory factor 1 Source HGNC Symbol Acc HGNC 23207
E10	SBH0324084	ENST00000395 997.3	SALL4	ENSG00000 101115	spalt like transcription factor 4 Source HGNC Symbol Acc HGNC 15924
E11	SBH0184531	ENST00000641 575.1	SCN1A	ENSG00000 144285	sodium voltage-gated channel alpha subunit 1 Source HGNC Symbol Acc HGNC 10585
E12	SBH1220404	ENST00000394 092.6	SMAD1	ENSG00000 170365	SMAD family member 1 Source HGNC Symbol Acc HGNC 6767
F01	SBH1220405	ENST00000262 160.11	SMAD2	ENSG00000 175387	SMAD family member 2 Source HGNC Symbol Acc HGNC 6768
F02	SBH0216540	ENST00000558 428.5	SMAD3	ENSG00000 166949	SMAD family member 3 Source HGNC Symbol Acc HGNC 6769
F03	SBH0255751	ENST00000570 788.1	SOX15	ENSG00000 129194	SRY-box 15 Source HGNC Symbol Acc HGNC 11196
F04	SBH1220417	ENST00000297 316.5	SOX17	ENSG00000 164736	SRY-box 17 Source HGNC Symbol Acc HGNC 18122
F05	SBH0499815	ENST00000325 404.3	SOX2	ENSG00000 181449	SRY-box 2 Source HGNC Symbol Acc HGNC 11195
F06	SBH0545860	ENST00000370 536.4	SOX3	ENSG00000 134595	SRY-box 3 Source HGNC Symbol Acc HGNC 11199
F07	SBH0095223	ENST00000304 501.2	SOX7	ENSG00000 171056	SRY-box 7 Source HGNC Symbol Acc HGNC 18196
F08	SBH0341614	ENST00000404 395.3	STAT3	ENSG00000 168610	signal transducer and activator of transcription 3 Source HGNC Symbol Acc HGNC 11364
F09	SBH0142967	ENST00000366 871.7	TBXT	ENSG00000 164458	T-box transcription factor T Source HGNC Symbol Acc HGNC 11515
F10	SBH0194372	ENST00000529 622.1	TAGLN	ENSG00000 149591	transgelin Source HGNC Symbol Acc HGNC 11553

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH0276450	ENST00000294339.3	TAL1	ENSG00000162367	TAL bHLH transcription factor 1, erythroid differentiation factor Source HGNC Symbol Acc HGNC 11556
F12	SBH0437274	ENST00000355962.5	TAT	ENSG00000198650	tyrosine aminotransferase Source HGNC Symbol Acc HGNC 11573
G01	SBH0075281	ENST00000257566.7	TBX3	ENSG00000135111	T-box 3 Source HGNC Symbol Acc HGNC 11602
G02	SBH0362567	ENST00000395423.7	TCF3	ENSG00000071564	transcription factor 3 Source HGNC Symbol Acc HGNC 11633
G03	SBH0009557	ENST00000556450.5	TCL1A	ENSG00000100721	T cell leukemia/lymphoma 1A Source NCBI gene Acc 8115
G04	SBH0577809	ENST00000471721.1	TDGF1	ENSG00000241186	teratocarcinoma-derived growth factor 1 Source HGNC Symbol Acc HGNC 11701
G05	SBH1220437	ENST00000380036.9	TEK	ENSG00000120156	TEK receptor tyrosine kinase Source HGNC Symbol Acc HGNC 11724
G06	SBH0606096	ENST00000334602.10	TERT	ENSG00000164362	telomerase reverse transcriptase Source HGNC Symbol Acc HGNC 11730
G07	SBH0161549	ENST00000303596.2	THAP11	ENSG00000168286	THAP domain containing 11 Source HGNC Symbol Acc HGNC 23194
G08	SBH0336000	ENST00000527590.5	THY1	ENSG00000154096	Thy-1 cell surface antigen Source HGNC Symbol Acc HGNC 11801
G09	SBH0544709	ENST00000253024.10	TRIM28	ENSG00000130726	tripartite motif containing 28 Source HGNC Symbol Acc HGNC 16384
G10	SBH0258384	ENST00000304477.3	UTF1	ENSG00000171794	undifferentiated embryonic cell transcription factor 1 Source HGNC Symbol Acc HGNC 12634
G11	SBH0270230	ENST00000326866.5	ZFP42	ENSG00000179059	ZFP42 zinc finger protein Source HGNC Symbol Acc HGNC 30949
G12	SBH0023392	ENST00000428571.5	ZFX	ENSG00000005889	zinc finger protein X-linked Source HGNC Symbol Acc HGNC 12869
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	ENSG000000089157	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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