

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

Human Glycosylation

Cat. no. 249950 SBHS-046ZA

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	A4GNT	AGA	B3GLCT	B3GNT2	B3GNT3	B3GNT4	B3GNT8	B4GALT1	B4GALT2	B4GALT3	B4GALT5	C1GALT1
B	C1GALT1C1	EDEM1	EDEM2	EDEM3	FUCA1	FUCA2	FUT11	FUT8	GALNT1	GALNT10	GALNT11	GALNT12
C	GALNT13	GALNT14	GALNT2	GALNT3	GALNT4	GALNT6	GALNT7	GALNT8	GALNT9	GALNT16	GALNTL5	GALNTL6
D	GANAB	GCNT1	GCNT3	GCNT4	GLB1	GNPTAB	GNPTG	HEXA	HEXB	MAN1A1	MAN1A2	MAN1B1
E	MAN1C1	MAN2A1	MAN2A2	MAN2B1	MANBA	MGAT1	MGAT2	MGAT3	MGAT4A	MGAT4B	MGAT4C	MGAT5
F	MGAT5B	MOGS	NAGPA	NEU1	NEU2	NEU3	NEU4	OGT	POFUT1	POFUT2	POIMGNT1	POMT1
G	POMT2	PRKCSH	ST3GAL1	ST3GAL2	ST6GAL1	ST6GALNAC1	ST8SIA2	ST8SIA3	ST8SIA4	ST8SIA6	UGGT1	UGGT2
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	SBH0109863	ENST00000236709.3	A4GNT	ENSG00000118017	alpha-1,4-N-acetylglucosaminyltransferase Source HGNC Symbol Acc HGNC 17968
A02	SBH0636692	ENST00000510955.5	AGA	ENSG00000038002	aspartylglucosaminidase Source HGNC Symbol Acc HGNC 318
A03	SBH0252743	ENST00000461652.2	B3GLCT	ENSG00000187676	beta 3-glucosyltransferase Source HGNC Symbol Acc HGNC 20207
A04	SBH0435714	ENST00000301998.5	B3GNT2	ENSG00000170340	UDP-GlcNAc betaGal beta-1,3-N-acetylglucosaminyltransferase 2 Source HGNC Symbol Acc HGNC 15629
A05	SBH0178905	ENST00000599265.5	B3GNT3	ENSG00000179913	UDP-GlcNAc betaGal beta-1,3-N-acetylglucosaminyltransferase 3 Source HGNC Symbol Acc HGNC 13528
A06	SBH0299081	ENST00000535274.1	B3GNT4	ENSG00000176383	UDP-GlcNAc betaGal beta-1,3-N-acetylglucosaminyltransferase 4 Source HGNC Symbol Acc HGNC 15683
A07	SBH0431002	ENST00000321702.2	B3GNT8	ENSG00000177191	UDP-GlcNAc betaGal beta-1,3-N-acetylglucosaminyltransferase 8 Source HGNC Symbol Acc HGNC 24139
A08	SBH0491756	ENST00000379731.4	B4GALT1	ENSG00000086062	beta-1,4-galactosyltransferase 1 Source HGNC Symbol Acc HGNC 924
A09	SBH0116907	ENST00000356836.10	B4GALT2	ENSG00000117411	beta-1,4-galactosyltransferase 2 Source HGNC Symbol Acc HGNC 925
A10	SBH0623974	ENST00000319769.10	B4GALT3	ENSG00000158850	beta-1,4-galactosyltransferase 3 Source HGNC Symbol Acc HGNC 926
A11	SBH0594805	ENST00000371711.4	B4GALT5	ENSG00000158470	beta-1,4-galactosyltransferase 5 Source HGNC Symbol Acc HGNC 928
A12	SBH0034018	ENST00000402468.3	C1GALT1	ENSG00000106392	core 1 synthase, glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransferase 1 Source HGNC Symbol Acc HGNC 24337
B01	SBH0643015	ENST00000304661.6	C1GALT1C1	ENSG00000171155	C1GALT1 specific chaperone 1 Source HGNC Symbol Acc HGNC 24338
B02	SBH0630231	ENST00000434243.5	EDEM1	ENSG00000134109	ER degradation enhancing alpha-mannosidase like protein 1 Source HGNC Symbol Acc HGNC 18967
B03	SBH0654509	ENST00000374492.8	EDEM2	ENSG00000088298	ER degradation enhancing alpha-mannosidase like protein 2 Source HGNC Symbol Acc HGNC 15877
B04	SBH0002655	ENST00000367512.7	EDEM3	ENSG00000116406	ER degradation enhancing alpha-mannosidase like protein 3 Source HGNC Symbol Acc HGNC 16787
B05	SBH0248945	ENST00000374479.3	FUCA1	ENSG00000179163	alpha-L-fucosidase 1 Source HGNC Symbol Acc HGNC 4006
B06	SBH0322806	ENST00000367585.1	FUCA2	ENSG00000001036	alpha-L-fucosidase 2 Source HGNC Symbol Acc HGNC 4008
B07	SBH0155206	ENST00000394790.2	FUT11	ENSG00000196968	fucosyltransferase 11 Source HGNC Symbol Acc HGNC 19233
B08	SBH0271406	ENST00000394586.6	FUT8	ENSG00000033170	fucosyltransferase 8 Source HGNC Symbol Acc HGNC 4019
B09	SBH0075206	ENST00000591081.1	GALNT1	ENSG00000141429	polypeptide N-acetylgalactosaminyltransferase 1 Source HGNC Symbol Acc HGNC 4123
B10	SBH0389387	ENST00000520647.5	GALNT10	ENSG00000164574	polypeptide N-acetylgalactosaminyltransferase 10 Source HGNC Symbol Acc HGNC 19873
B11	SBH0413781	ENST00000430044.7	GALNT11	ENSG00000178234	polypeptide N-acetylgalactosaminyltransferase 11 Source HGNC Symbol Acc HGNC 19875
B12	SBH0208681	ENST00000375011.4	GALNT12	ENSG00000119514	polypeptide N-acetylgalactosaminyltransferase 12 Source HGNC Symbol Acc HGNC 19877
C01	SBH0553162	ENST00000487047.1	GALNT13	ENSG00000144278	polypeptide N-acetylgalactosaminyltransferase 13 Source HGNC Symbol Acc HGNC 23242
C02	SBH0446063	ENST00000461193.5	GALNT14	ENSG00000158089	polypeptide N-acetylgalactosaminyltransferase 14 Source HGNC Symbol Acc HGNC 22946
C03	SBH0295891	ENST00000485438.1	GALNT2	ENSG00000143641	polypeptide N-acetylgalactosaminyltransferase 2 Source HGNC Symbol Acc HGNC 4124
C04	SBH0196411	ENST00000392701.7	GALNT3	ENSG00000115339	polypeptide N-acetylgalactosaminyltransferase 3 Source HGNC Symbol Acc HGNC 4125
C05	SBH0271630	ENST00000529983.3	GALNT4	ENSG00000257594	polypeptide N-acetylgalactosaminyltransferase 4 Source HGNC Symbol Acc HGNC 4126
C06	SBH0656409	ENST00000603188.5	GALNT6	ENSG00000139629	polypeptide N-acetylgalactosaminyltransferase 6 Source HGNC Symbol Acc HGNC 4128
C07	SBH0217199	ENST00000505308.5	GALNT7	ENSG00000109586	polypeptide N-acetylgalactosaminyltransferase 7 Source HGNC Symbol Acc HGNC 4129
C08	SBH0536105	ENST00000252318.6	GALNT8	ENSG00000130035	polypeptide N-acetylgalactosaminyltransferase 8 Source HGNC Symbol Acc HGNC 4130
C09	SBH0078280	ENST00000328957.13	GALNT9	ENSG00000182870	polypeptide N-acetylgalactosaminyltransferase 9 Source HGNC Symbol Acc HGNC 4131
C10	SBH0146277	ENST00000337827.8	GALNT16	ENSG00000100626	polypeptide N-acetylgalactosaminyltransferase 16 Source HGNC Symbol Acc HGNC 23233
		ENST00000416		ENSG000000	polypeptide N-acetylgalactosaminyltransferase like 5 Source HGNC Symbol Acc

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBH0669003	269.6	GALNTL5	106648	HGNC 21725
C12	SBH0585505	ENST00000616459.1	GALNTL6	ENSG00000174473	polypeptide N-acetylgalactosaminyltransferase like 6 Source HGNC Symbol Acc HGNC 33844
D01	SBH0041525	ENST00000534613.5	GANAB	ENSG00000089597	glucosidase II alpha subunit Source HGNC Symbol Acc HGNC 4138
D02	SBH0622964	ENST00000442371.5	GCNT1	ENSG000000187210	glucosaminyl (N-acetyl) transferase 1 Source HGNC Symbol Acc HGNC 4203
D03	SBH0599398	ENST00000559189.5	GCNT3	ENSG000000140297	glucosaminyl (N-acetyl) transferase 3, mucin type Source HGNC Symbol Acc HGNC 4205
D04	SBH0547766	ENST00000322348.5	GCNT4	ENSG000000176928	glucosaminyl (N-acetyl) transferase 4 Source HGNC Symbol Acc HGNC 17973
D05	SBH0161579	ENST00000399402.7	GLB1	ENSG000000170266	galactosidase beta 1 Source HGNC Symbol Acc HGNC 4298
D06	SBH0376559	ENST00000549165.1	GNPTAB	ENSG000000111670	N-acetylglucosamine-1-phosphate transferase subunits alpha and beta Source HGNC Symbol Acc HGNC 29670
D07	SBH0434406	ENST00000529110.1	GNPTG	ENSG000000090581	N-acetylglucosamine-1-phosphate transferase subunit gamma Source HGNC Symbol Acc HGNC 23026
D08	SBH0002867	ENST00000566304.5	HEXA	ENSG000000213614	hexosaminidase subunit alpha Source HGNC Symbol Acc HGNC 4878
D09	SBH0260379	ENST00000511181.5	HEXB	ENSG000000049860	hexosaminidase subunit beta Source HGNC Symbol Acc HGNC 4879
D10	SBH0540112	ENST00000368468.4	MAN1A1	ENSG000000111885	mannosidase alpha class 1A member 1 Source HGNC Symbol Acc HGNC 6821
D11	SBH0459923	ENST00000421535.5	MAN1A2	ENSG000000198162	mannosidase alpha class 1A member 2 Source HGNC Symbol Acc HGNC 6822
D12	SBH0418284	ENST00000542372.1	MAN1B1	ENSG000000177239	mannosidase alpha class 1B member 1 Source HGNC Symbol Acc HGNC 6823
E01	SBH0098311	ENST00000263979.7	MAN1C1	ENSG000000117643	mannosidase alpha class 1C member 1 Source HGNC Symbol Acc HGNC 19080
E02	SBH0347425	ENST00000261483.4	MAN2A1	ENSG000000112893	mannosidase alpha class 2A member 1 Source HGNC Symbol Acc HGNC 6824
E03	SBH0630339	ENST00000560147.5	MAN2A2	ENSG000000196547	mannosidase alpha class 2A member 2 Source HGNC Symbol Acc HGNC 6825
E04	SBH0312091	ENST00000462144.1	MAN2B1	ENSG000000104774	mannosidase alpha class 2B member 1 Source HGNC Symbol Acc HGNC 6826
E05	SBH0451732	ENST00000514430.5	MANBA	ENSG000000109323	mannosidase beta Source HGNC Symbol Acc HGNC 6831
E06	SBH0477372	ENST00000446023.6	MGAT1	ENSG000000131446	mannosyl (alpha-1,3-)-glycoprotein beta-1,2-N-acetylglucosaminyltransferase Source HGNC Symbol Acc HGNC 7044
E07	SBH0635720	ENST00000305386.3	MGAT2	ENSG000000168282	mannosyl (alpha-1,6-)-glycoprotein beta-1,2-N-acetylglucosaminyltransferase Source HGNC Symbol Acc HGNC 7045
E08	SBH0414800	ENST00000429402.1	MGAT3	ENSG000000128268	mannosyl (beta-1,4-)-glycoprotein beta-1,4-N-acetylglucosaminyltransferase Source HGNC Symbol Acc HGNC 7046
E09	SBH0458254	ENST00000409391.1	MGAT4A	ENSG000000071073	alpha-1,3-mannosyl-glycoprotein 4-beta-N-acetylglucosaminyltransferase A Source HGNC Symbol Acc HGNC 7047
E10	SBH0311934	ENST00000292591.12	MGAT4B	ENSG000000161013	alpha-1,3-mannosyl-glycoprotein 4-beta-N-acetylglucosaminyltransferase B Source HGNC Symbol Acc HGNC 7048
E11	SBH0227149	ENST00000620241.4	MGAT4C	ENSG000000182050	MGAT4 family member C Source HGNC Symbol Acc HGNC 30871
E12	SBH0419990	ENST00000281923.4	MGAT5	ENSG000000152127	alpha-1,6-mannosylglycoprotein 6-beta-N-acetylglucosaminyltransferase Source HGNC Symbol Acc HGNC 7049
F01	SBH0617862	ENST00000569840.6	MGAT5B	ENSG000000167889	alpha-1,6-mannosylglycoprotein 6-beta-N-acetylglucosaminyltransferase B Source HGNC Symbol Acc HGNC 24140
F02	SBH0495692	ENST00000649601.1	MOGS	ENSG000000115275	mannosyl-oligosaccharide glucosidase Source HGNC Symbol Acc HGNC 24862
F03	SBH0285324	ENST00000312251.8	NAGPA	ENSG000000103174	N-acetylglucosamine-1-phosphodiester alpha-N-acetylglucosaminidase Source HGNC Symbol Acc HGNC 17378
F04	SBH0536981	ENST00000495807.1	NEU1	ENSG000000204386	neuraminidase 1 Source HGNC Symbol Acc HGNC 7758
F05	SBH0246630	ENST00000233840.3	NEU2	ENSG000000115488	neuraminidase 2 Source HGNC Symbol Acc HGNC 7759
F06	SBH0084966	ENST00000294064.9	NEU3	ENSG000000162139	neuraminidase 3 Source HGNC Symbol Acc HGNC 7760
F07	SBH0351680	ENST00000415936.5	NEU4	ENSG000000204099	neuraminidase 4 Source HGNC Symbol Acc HGNC 21328
F08	SBH0060497	ENST00000488174.5	OGT	ENSG000000147162	O-linked N-acetylglucosamine (GlcNAc) transferase Source HGNC Symbol Acc HGNC 8127
F09	SBH0091739	ENST00000486717.5	POFUT1	ENSG000000101346	protein O-fucosyltransferase 1 Source HGNC Symbol Acc HGNC 14988
F10	SBH0055872	ENST00000493524.5	POFUT2	ENSG000000186866	protein O-fucosyltransferase 2 Source HGNC Symbol Acc HGNC 14683

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBH0127825	ENST00000371992.1	POMGNT1	ENSG00000085998	protein O-linked mannose N-acetylglucosaminyltransferase 1 (beta 1,2-) Source HGNC Symbol Acc HGNC 19139
F12	SBH0367139	ENST00000423007.5	POMT1	ENSG00000130714	protein O-mannosyltransferase 1 Source HGNC Symbol Acc HGNC 9202
G01	SBH0609149	ENST00000261534.8	POMT2	ENSG00000009830	protein O-mannosyltransferase 2 Source HGNC Symbol Acc HGNC 19743
G02	SBH0313432	ENST00000592741.5	PRKCSH	ENSG00000130175	protein kinase C substrate 80K-H Source HGNC Symbol Acc HGNC 9411
G03	SBH0267608	ENST00000521180.5	ST3GAL1	ENSG00000008513	ST3 beta-galactoside alpha-2,3-sialyltransferase 1 Source HGNC Symbol Acc HGNC 10862
G04	SBH0543862	ENST00000393640.8	ST3GAL2	ENSG00000157350	ST3 beta-galactoside alpha-2,3-sialyltransferase 2 Source HGNC Symbol Acc HGNC 10863
G05	SBH0625692	ENST00000446170.1	ST6GAL1	ENSG00000073849	ST6 beta-galactoside alpha-2,6-sialyltransferase 1 Source HGNC Symbol Acc HGNC 10860
G06	SBH0159281	ENST00000589004.5	ST6GALNA C1	ENSG00000070526	ST6 N-acetylgalactosaminide alpha-2,6-sialyltransferase 1 Source HGNC Symbol Acc HGNC 23614
G07	SBH0457731	ENST00000555434.1	ST8SIA2	ENSG00000140557	ST8 alpha-N-acetyl-neuraminide alpha-2,8-sialyltransferase 2 Source HGNC Symbol Acc HGNC 10870
G08	SBH0167404	ENST00000324000.4	ST8SIA3	ENSG00000177511	ST8 alpha-N-acetyl-neuraminide alpha-2,8-sialyltransferase 3 Source HGNC Symbol Acc HGNC 14269
G09	SBH0050768	ENST00000451528.2	ST8SIA4	ENSG00000113532	ST8 alpha-N-acetyl-neuraminide alpha-2,8-sialyltransferase 4 Source HGNC Symbol Acc HGNC 10871
G10	SBH0259825	ENST00000377602.5	ST8SIA6	ENSG00000148488	ST8 alpha-N-acetyl-neuraminide alpha-2,8-sialyltransferase 6 Source HGNC Symbol Acc HGNC 23317
G11	SBH0200086	ENST00000376723.7	UGGT1	ENSG00000136731	UDP-glucose glycoprotein glucosyltransferase 1 Source HGNC Symbol Acc HGNC 15663
G12	SBH0537999	ENST00000638479.1	UGGT2	ENSG00000102595	UDP-glucose glycoprotein glucosyltransferase 2 Source HGNC Symbol Acc HGNC 15664
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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