

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

## Human Tight Junctions

Cat. no. 249955 UPHS-143ZR

For study focus gene expression analysis

### Shipping and storage

QuantiNova LNA Probe PCR Focus Panels are shipped at room temperature. Immediately upon receipt, they should be stored protected from light 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 Probe PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova Probe PCR Kit (Mastermix) for PCR.

### Panel layout (Rotor-Gene): QuantiNova LNA Probe 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 Probe PCR 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	ACTN1	ACTN2	ACTN3	ACTN4	AMOTL1	ARHGEF2	ASH1L	CASK	CD99	CDC42	CDK4	CGN
B	CLDN1	CLDN10	CLDN11	CLDN12	CLDN14	CLDN15	CLDN16	CLDN17	CLDN18	CLDN19	CLDN2	CLDN3
C	CLDN4	CLDN5	CLDN6	CLDN7	CLDN8	CLDN9	CRB1	CRB3	YBX3	CSNK2A1	CSNK2A2	CSNK2B
D	CTNNA1	CTNNA2	CTNNA3	CTNNB1	CTTN	EPB41	ESAM	F11R	GNAI1	HCLS1	ICAM1	ICAM2
E	IGSF5	ILK	PATJ	JAM2	JAM3	LLGL1	LLGL2	MAGI1	MAGI2	MARK2	AFDN	MPDZ
F	MPP5	MPP6	OCLN	PARD3	PARD6A	PARD6B	PECAM1	PRKCI	PRKCZ	PTEN	RAC1	RHOA
G	SMURF1	SPTA1	SPTAN1	SPTB	SYMPK	TIAM1	TJAP1	TJP1	TJP2	TJP3	VAPA	MAP3K20
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFH0586030	ENST00000438 964.6	ACTN1	ENSG000000 072110	actinin alpha 1 Source HGNC Symbol Acc HGNC 163
A02	UPFH0081778	ENST00000651 275.1	ACTN2	ENSG000000 077522	actinin alpha 2 Source HGNC Symbol Acc HGNC 164
A03	UPFH0531688	ENST00000513 398.2	ACTN3	ENSG000000 248746	actinin alpha 3 (gene/pseudogene) Source HGNC Symbol Acc HGNC 165
A04	UPFH0354547	ENST00000390 009.7	ACTN4	ENSG000000 130402	actinin alpha 4 Source HGNC Symbol Acc HGNC 166
A05	UPFH0122054	ENST00000317 829.12	AMOTL1	ENSG000000 166025	angiomin like 1 Source HGNC Symbol Acc HGNC 17811
A06	UPFH0260925	ENST00000609 707.1	ARHGEF2	ENSG000000 116584	Rho/Rac guanine nucleotide exchange factor 2 Source HGNC Symbol Acc HGNC 682
A07	UPFH1132242	ENST00000392 403.8	ASH1L	ENSG000000 116539	ASH1 like histone lysine methyltransferase Source HGNC Symbol Acc HGNC 19088
A08	UPFH0587212	ENST00000645 986.1	CASK	ENSG000000 147044	calcium/calmodulin dependent serine protein kinase Source HGNC Symbol Acc HGNC 1497
A09	UPFH0361855	ENST00000624 481.4	CD99	ENSG000000 002586	CD99 molecule (Xg blood group) Source HGNC Symbol Acc HGNC 7082
A10	UPFH0571108	ENST00000400 259.5	CDC42	ENSG000000 070831	cell division cycle 42 Source HGNC Symbol Acc HGNC 1736
A11	UPFH0291148	ENST00000549 606.5	CDK4	ENSG000000 135446	cyclin dependent kinase 4 Source HGNC Symbol Acc HGNC 1773
A12	UPFH0184505	ENST00000502 442.1	CGN	ENSG000000 143375	cingulin Source HGNC Symbol Acc HGNC 17429
B01	UPFH0397114	ENST00000490 800.1	CLDN1	ENSG000000 163347	claudin 1 Source HGNC Symbol Acc HGNC 2032
B02	UPFH0173767	ENST00000299 339.3	CLDN10	ENSG000000 134873	claudin 10 Source HGNC Symbol Acc HGNC 2033
B03	UPFH0093496	ENST00000468 358.5	CLDN11	ENSG000000 013297	claudin 11 Source HGNC Symbol Acc HGNC 8514
B04	UPFH0123547	ENST00000427 904.1	CLDN12	ENSG000000 157224	claudin 12 Source HGNC Symbol Acc HGNC 2034
B05	UPFH0104304	ENST00000342 108.2	CLDN14	ENSG000000 159261	claudin 14 Source HGNC Symbol Acc HGNC 2035
B06	UPFH0099812	ENST00000401 528.5	CLDN15	ENSG000000 106404	claudin 15 Source HGNC Symbol Acc HGNC 2036
B07	UPFH0074228	ENST00000456 423.1	CLDN16	ENSG000000 113946	claudin 16 Source HGNC Symbol Acc HGNC 2037
B08	UPFH0002852	ENST00000286 808.4	CLDN17	ENSG000000 156282	claudin 17 Source HGNC Symbol Acc HGNC 2038
B09	UPFH0044848	ENST00000343 735.8	CLDN18	ENSG000000 066405	claudin 18 Source HGNC Symbol Acc HGNC 2039
B10	UPFH0068114	ENST00000296 387.5	CLDN19	ENSG000000 164007	claudin 19 Source HGNC Symbol Acc HGNC 2040
B11	UPFH0009167	ENST00000336 803.1	CLDN2	ENSG000000 165376	claudin 2 Source HGNC Symbol Acc HGNC 2041
B12	UPFH0137950	ENST00000395 145.3	CLDN3	ENSG000000 165215	claudin 3 Source HGNC Symbol Acc HGNC 2045
C01	UPFH0398073	ENST00000431 918.1	CLDN4	ENSG000000 189143	claudin 4 Source HGNC Symbol Acc HGNC 2046
C02	UPFH0032444	ENST00000618 236.1	CLDN5	ENSG000000 184113	claudin 5 Source HGNC Symbol Acc HGNC 2047
C03	UPFH0480601	ENST00000328 796.5	CLDN6	ENSG000000 184697	claudin 6 Source HGNC Symbol Acc HGNC 2048
C04	UPFH0127687	ENST00000571 881.2	CLDN7	ENSG000000 181885	claudin 7 Source HGNC Symbol Acc HGNC 2049
C05	UPFH0547397	ENST00000399 899.1	CLDN8	ENSG000000 156284	claudin 8 Source HGNC Symbol Acc HGNC 2050
C06	UPFH0211617	ENST00000445 369.3	CLDN9	ENSG000000 213937	claudin 9 Source HGNC Symbol Acc HGNC 2051
C07	UPFH0596843	ENST00000367 400.8	CRB1	ENSG000000 134376	crumbs cell polarity complex component 1 Source HGNC Symbol Acc HGNC 2343
C08	UPFH0191683	ENST00000598 494.5	CRB3	ENSG000000 130545	crumbs cell polarity complex component 3 Source HGNC Symbol Acc HGNC 20237
C09	UPFH0172278	ENST00000279 550.11	YBX3	ENSG000000 060138	Y-box binding protein 3 Source HGNC Symbol Acc HGNC 2428
C10	UPFH0055149	ENST00000645 249.1	CSNK2A1	ENSG000000 101266	casein kinase 2 alpha 1 Source HGNC Symbol Acc HGNC 2457
		ENST00000563		ENSG000000	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFH0043887	307.1	CSNK2A2	070770	casein kinase 2 alpha 2 Source HGNC Symbol Acc HGNC 2459
C12	UPFH0261524	ENST00000375882.6	CSNK2B	ENSG00000204435	casein kinase 2 beta Source HGNC Symbol Acc HGNC 2460
D01	UPFH0447603	ENST00000627109.2	CTNNA1	ENSG00000044115	catenin alpha 1 Source HGNC Symbol Acc HGNC 2509
D02	UPFH0430223	ENST00000466387.5	CTNNA2	ENSG00000066032	catenin alpha 2 Source HGNC Symbol Acc HGNC 2510
D03	UPFH0332684	ENST00000373735.1	CTNNA3	ENSG000000183230	catenin alpha 3 Source HGNC Symbol Acc HGNC 2511
D04	UPFH0097734	ENST00000396183.7	CTNNB1	ENSG000000168036	catenin beta 1 Source HGNC Symbol Acc HGNC 2514
D05	UPFH0238959	ENST00000498223.3	CTTN	ENSG000000085733	cortactin Source HGNC Symbol Acc HGNC 3338
D06	UPFH0100360	ENST00000645184.1	EPB41	ENSG000000159023	erythrocyte membrane protein band 4.1 Source HGNC Symbol Acc HGNC 3377
D07	UPFH0419978	ENST00000417453.5	ESAM	ENSG000000149564	endothelial cell adhesion molecule Source HGNC Symbol Acc HGNC 17474
D08	UPFH1132391	ENST00000621309.4	F11R	ENSG000000158769	F11 receptor Source HGNC Symbol Acc HGNC 14685
D09	UPFH0461499	ENST00000649485.1	GNAI1	ENSG000000127955	G protein subunit alpha i1 Source HGNC Symbol Acc HGNC 4384
D10	UPFH0479513	ENST00000464274.5	HCLS1	ENSG000000180353	hematopoietic cell-specific Lyn substrate 1 Source HGNC Symbol Acc HGNC 4844
D11	UPFH1132462	ENST00000264832.8	ICAM1	ENSG000000090339	intercellular adhesion molecule 1 Source HGNC Symbol Acc HGNC 5344
D12	UPFH0413963	ENST00000449662.6	ICAM2	ENSG000000108622	intercellular adhesion molecule 2 Source HGNC Symbol Acc HGNC 5345
E01	UPFH0427098	ENST00000380588.4	IGSF5	ENSG000000183067	immunoglobulin superfamily member 5 Source HGNC Symbol Acc HGNC 5952
E02	UPFH0412404	ENST00000299421.8	ILK	ENSG000000166333	integrin linked kinase Source HGNC Symbol Acc HGNC 6040
E03	UPFH0573528	ENST00000316485.11	PATJ	ENSG000000132849	PATJ, crumbs cell polarity complex component Source HGNC Symbol Acc HGNC 28881
E04	UPFH0152888	ENST00000460679.5	JAM2	ENSG000000154721	junctional adhesion molecule 2 Source HGNC Symbol Acc HGNC 14686
E05	UPFH0322315	ENST00000532165.1	JAM3	ENSG000000166086	junctional adhesion molecule 3 Source HGNC Symbol Acc HGNC 15532
E06	UPFH0228579	ENST00000621229.1	LLGL1	ENSG000000131899	LLGL scribble cell polarity complex component 1 Source HGNC Symbol Acc HGNC 6628
E07	UPFH0592294	ENST00000578536.5	LLGL2	ENSG000000073350	LLGL scribble cell polarity complex component 2 Source HGNC Symbol Acc HGNC 6629
E08	UPFH0096021	ENST00000611645.4	MAG1	ENSG000000151276	membrane associated guanylate kinase, WW and PDZ domain containing 1 Source HGNC Symbol Acc HGNC 946
E09	UPFH0570111	ENST00000535697.5	MAG2	ENSG000000187391	membrane associated guanylate kinase, WW and PDZ domain containing 2 Source HGNC Symbol Acc HGNC 18957
E10	UPFH0510122	ENST00000513765.6	MARK2	ENSG000000072518	microtubule affinity regulating kinase 2 Source HGNC Symbol Acc HGNC 3332
E11	UPFH0347005	ENST00000366806.6	AFDN	ENSG000000130396	afadin, adherens junction formation factor Source HGNC Symbol Acc HGNC 7137
E12	UPFH0017243	ENST00000546205.5	MPDZ	ENSG000000107186	multiple PDZ domain crumbs cell polarity complex component Source HGNC Symbol Acc HGNC 7208
F01	UPFH0189029	ENST00000261681.8	MPP5	ENSG000000072415	membrane palmitoylated protein 5 Source HGNC Symbol Acc HGNC 18669
F02	UPFH0029447	ENST00000430180.5	MPP6	ENSG000000105926	membrane palmitoylated protein 6 Source HGNC Symbol Acc HGNC 18167
F03	UPFH1132600	ENST00000355237.6	OCLN	ENSG000000197822	occludin Source HGNC Symbol Acc HGNC 8104
F04	UPFH0076865	ENST00000340077.9	PARD3	ENSG000000148498	par-3 family cell polarity regulator Source HGNC Symbol Acc HGNC 16051
F05	UPFH0458032	ENST00000219255.3	PARD6A	ENSG000000102981	par-6 family cell polarity regulator alpha Source HGNC Symbol Acc HGNC 15943
F06	UPFH0413646	ENST00000396039.1	PARD6B	ENSG000000124171	par-6 family cell polarity regulator beta Source HGNC Symbol Acc HGNC 16245
F07	UPFH1132613	ENST00000563924.6	PECAM1	ENSG000000261371	platelet and endothelial cell adhesion molecule 1 Source HGNC Symbol Acc HGNC 8823
F08	UPFH0115663	ENST00000485837.5	PRKCI	ENSG000000163558	protein kinase C iota Source HGNC Symbol Acc HGNC 9404
F09	UPFH1132634	ENST00000378567.8	PRKCZ	ENSG000000067606	protein kinase C zeta Source HGNC Symbol Acc HGNC 9412
F10	UPFH1132982	ENST00000371953.8	PTEN	ENSG000000171862	phosphatase and tensin homolog Source HGNC Symbol Acc HGNC 9588

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH1132648	ENST00000348035.9	RAC1	ENSG00000136238	Rac family small GTPase 1 Source HGNC Symbol Acc HGNC 9801
F12	UPFH1132657	ENST00000445425.4	RHOA	ENSG00000067560	ras homolog family member A Source HGNC Symbol Acc HGNC 667
G01	UPFH0346334	ENST00000361125.1	SMURF1	ENSG00000198742	SMAD specific E3 ubiquitin protein ligase 1 Source HGNC Symbol Acc HGNC 16807
G02	UPFH0205944	ENST00000492934.1	SPTA1	ENSG00000163554	spectrin alpha, erythrocytic 1 Source HGNC Symbol Acc HGNC 11272
G03	UPFH0127374	ENST00000630866.1	SPTAN1	ENSG00000197694	spectrin alpha, non-erythrocytic 1 Source HGNC Symbol Acc HGNC 11273
G04	UPFH0330530	ENST00000644917.1	SPTB	ENSG00000070182	spectrin beta, erythrocytic Source HGNC Symbol Acc HGNC 11274
G05	UPFH0341870	ENST00000599814.5	SYMPK	ENSG00000125755	symplekin Source HGNC Symbol Acc HGNC 22935
G06	UPFH0108336	ENST00000423206.5	TIAM1	ENSG00000156299	T cell lymphoma invasion and metastasis 1 Source HGNC Symbol Acc HGNC 11805
G07	UPFH0574774	ENST00000459851.5	TJAP1	ENSG00000137221	tight junction associated protein 1 Source HGNC Symbol Acc HGNC 17949
G08	UPFH0310877	ENST00000558447.1	TJP1	ENSG00000104067	tight junction protein 1 Source HGNC Symbol Acc HGNC 11827
G09	UPFH0564119	ENST00000649783.1	TJP2	ENSG00000119139	tight junction protein 2 Source HGNC Symbol Acc HGNC 11828
G10	UPFH0597202	ENST00000541714.7	TJP3	ENSG00000105289	tight junction protein 3 Source HGNC Symbol Acc HGNC 11829
G11	UPFH0279607	ENST00000583879.5	VAPA	ENSG00000101558	VAMP associated protein A Source HGNC Symbol Acc HGNC 12648
G12	UPFH0294426	ENST00000539448.5	MAP3K20	ENSG00000091436	mitogen-activated protein kinase kinase kinase 20 Source HGNC Symbol Acc HGNC 17797
H01	UPFH1132936	ENST00000646664.1	ACTB	ENSG00000075624	actin beta Source HGNC Symbol Acc HGNC 132
H02	UPFH1132937	ENST00000544417.5	B2M	ENSG00000166710	beta-2-microglobulin Source HGNC Symbol Acc HGNC 914
H03	UPFH1132938	ENST00000229239.10	GAPDH	ENSG00000111640	glyceraldehyde-3-phosphate dehydrogenase Source HGNC Symbol Acc HGNC 4141
H04	UPFH1132939	ENST00000298556.8	HPRT1	ENSG00000165704	hypoxanthine phosphoribosyltransferase 1 Source HGNC Symbol Acc HGNC 5157
H05	UPFH1132941	ENST00000392514.9	RPLP0	ENSG00000089157	ribosomal protein lateral stalk subunit P0 Source HGNC Symbol Acc HGNC 10371
H06	UPFH1126608	UPL_HGDC	HGDC	UPL_HGDC	Human Genomic DNA Contamination
H07	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H08	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H09	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H10	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control
H11	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control
H12	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control



## Related products

Product	Contents	Cat. no.
QuantiNova LNA Probe PCR QC Panel	These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA Probe PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats	249945
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 Probe RT-PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml QuantiNova Probe RT-PCR Master Mix, 20 $\mu$ l QuantiNova Probe 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	208352
QuantiNova Probe PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml 2x QuantiNova Probe PCR Master Mix, 500 $\mu$ l QuantiNova Yellow Template Dilution Buffer, 250 $\mu$ l QN ROX Reference Dye, 1.9 ml Water	208252

\*Larger kit sizes available.

The QuantiNova LNA Probe 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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