

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

## Rat Tight Junctions

Cat. no. 249955 UPRN-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	Actn3	Actn4	Amotl1	Arhgef2	Ash1l	LOC100910506	Cdc42	Cdh5	Cdk4	Cldn1	Cldn10
B	Cldn11	Cldn12	Cldn14	Cldn15	Cldn16	Cldn17	Cldn18	Cldn19	Cldn2	Cldn3	Cldn4	Cldn5
C	Cldn6	Cldn7	Cldn8	Cldn9	Crb1	Crb3	Ybx3	Csnk2a1	Csnk2a2	Csnk2b	Ctnna2	Ctnnb1
D	Cttn	Epb41l1	Epb41l3	Esam	F11r	Gnai1	Gnai2	Gsk3a	Gsk3b	Hcls1	Icam1	Icam2
E	Ilk	Jam3	Lig1	Lig2	Igsf5	Magi2	Magi3	Mark2	Afdn	Mpdz	Mpp5	Mpp6
F	Ocln	Pard3	Pard6a	Pard6b	Epcam	Prkci	Prkcz	Pten	Rac1	Smurf1	Rhoa	Spta1
G	Splan1	Sptb	Sptbn1	Sptbn2	Sptbn4	Sympk	Tiam1	Tjap1	Tjp1	Tjp2	Tjp3	Vapa
H	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFR1055702	ENSRNOT00000088795.1	Actn1	ENSRNOG0000056756	actinin, alpha 1 Source RGD Symbol Acc 70907
A02	UPFR1098063	ENSRNOT00000026812.5	Actn3	ENSRNOG0000019745	actinin alpha 3 Source RGD Symbol Acc 621792
A03	UPFR1049536	ENSRNOT00000090402.1	Actn4	ENSRNOG0000020433	actinin alpha 4 Source RGD Symbol Acc 61816
A04	UPFR1047640	ENSRNOT00000061616.4	Amotl1	ENSRNOG0000008990	angiomin-like 1 Source MGI Symbol Acc MGI 1922973
A05	UPFR1022218	ENSRNOT00000093033.1	Arhgef2	ENSRNOG0000020027	Rho/Rac guanine nucleotide exchange factor 2 Source RGD Symbol Acc 1304659
A06	UPFR1088433	ENSRNOT00000085690.1	Ash1l	ENSRNOG0000020386	ASH1 like histone lysine methyltransferase Source RGD Symbol Acc 1306350
A07	UPFR1021512	ENSRNOT00000084218.1	LOC100910506	ENSRNOG0000060946	calcium/calmodulin dependent serine protein kinase Source RGD Symbol Acc 62004
A08	UPFR1103160	ENSRNOT00000018118.5	Cdc42	ENSRNOG0000013536	cell division cycle 42 Source RGD Symbol Acc 71043
A09	UPFR1038288	ENSRNOT00000017983.6	Cdh5	ENSRNOG0000013324	cadherin 5 Source RGD Symbol Acc 1307370
A10	UPFR1035170	ENSRNOT00000031796.4	Cdk4	ENSRNOG0000025602	cyclin-dependent kinase 4 Source RGD Symbol Acc 621120
A11	UPFR1026926	ENSRNOT00000002640.5	Cldn1	ENSRNOG0000001926	claudin 1 Source RGD Symbol Acc 68422
A12	UPFR1045278	ENSRNOT00000083269.2	Cldn10	ENSRNOG0000010085	claudin 10 Source RGD Symbol Acc 1308027
B01	UPFR1083965	ENSRNOT00000014359.5	Cldn11	ENSRNOG0000010263	claudin 11 Source RGD Symbol Acc 71081
B02	UPFR1013752	ENSRNOT00000061199.2	Cldn12	ENSRNOG0000039862	claudin 12 Source RGD Symbol Acc 1561053
B03	UPFR1045669	ENSRNOT00000002297.3	Cldn14	ENSRNOG0000001691	claudin 14 Source RGD Symbol Acc 1309165
B04	UPFR1101195	ENSRNOT00000001923.7	Cldn15	ENSRNOG0000001419	claudin 15 Source RGD Symbol Acc 1310678
B05	UPFR1102415	ENSRNOT00000083319.1	Cldn16	ENSRNOG0000055138	claudin 16 Source RGD Symbol Acc 620322
B06	UPFR1052570	ENSRNOT00000032663.2	Cldn17	ENSRNOG0000027691	claudin 17 Source RGD Symbol Acc 1307462
B07	UPFR1047712	ENSRNOT00000052043.4	Cldn18	ENSRNOG0000030386	claudin 18 Source RGD Symbol Acc 1359696
B08	UPFR1092796	ENSRNOT00000047151.2	Cldn19	ENSRNOG0000007922	claudin 19 Source RGD Symbol Acc 1305000
B09	UPFR1025125	ENSRNOT00000085078.1	Cldn2	ENSRNOG0000054495	claudin 2 Source RGD Symbol Acc 1560247
B10	UPFR1030875	ENSRNOT00000075280.2	Cldn3	ENSRNOG0000046007	claudin 3 Source RGD Symbol Acc 68425
B11	UPFR1100674	ENSRNOT00000002003.4	Cldn4	ENSRNOG0000001476	claudin 4 Source RGD Symbol Acc 1307932
B12	UPFR1112700	ENSRNOT00000071806.2	Cldn5	ENSRNOG0000045811	claudin 5 Source RGD Symbol Acc 68431
C01	UPFR1053015	ENSRNOT00000004845.4	Cldn6	ENSRNOG0000003648	claudin 6 Source RGD Symbol Acc 1308837
C02	UPFR1052768	ENSRNOT00000079237.1	Cldn7	ENSRNOG0000017325	claudin 7 Source RGD Symbol Acc 68432
C03	UPFR1043069	ENSRNOT00000002138.5	Cldn8	ENSRNOG0000001571	claudin 8 Source RGD Symbol Acc 1308575
C04	UPFR1072189	ENSRNOT00000004848.3	Cldn9	ENSRNOG0000003654	claudin 9 Source RGD Symbol Acc 1308999
C05	UPFR1053780	ENSRNOT00000032122.5	Crb1	ENSRNOG0000010903	crumbs cell polarity complex component 1 Source RGD Symbol Acc 1309947
C06	UPFR1120709	ENSRNOT00000071780.1	Crb3	ENSRNOG0000047322	crumbs cell polarity complex component 3 Source RGD Symbol Acc 1565035
C07	UPFR1023744	ENSRNOT00000068185.3	Ybx3	ENSRNOG0000005480	Y box binding protein 3 Source RGD Symbol Acc 621056
C08	UPFR1071105	ENSRNOT00000007558.5	Csnk2a1	ENSRNOG0000005276	casein kinase 2 alpha 1 Source RGD Symbol Acc 621663
C09	UPFR1028007	ENSRNOT00000016386.7	Csnk2a2	ENSRNOG0000011933	casein kinase 2 alpha 2 Source RGD Symbol Acc 1306882
C10	UPFR1014922	ENSRNOT00000076528.1	Csnk2b	ENSRNOG0000000847	casein kinase 2 beta Source RGD Symbol Acc 619978
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFR1030863	007971.7	Ctnna2	000006003	catenin alpha 2 Source RGD Symbol Acc 1305060
C12	UPFR1057605	ENSRNOT00000 079085.1	Ctnnb1	ENSRNOG00 000054172	catenin beta 1 Source RGD Symbol Acc 70487
D01	UPFR1014051	ENSRNOT00000 092916.1	Ctn	ENSRNOG00 000047280	cortactin Source RGD Symbol Acc 619839
D02	UPFR1115955	ENSRNOT00000 089719.1	Epb4111	ENSRNOG00 000057817	erythrocyte membrane protein band 4.1-like 1 Source RGD Symbol Acc 71087
D03	UPFR1029825	ENSRNOT00000 088647.1	Epb4113	ENSRNOG00 000016724	erythrocyte membrane protein band 4.1-like 3 Source RGD Symbol Acc 71089
D04	UPFR1106503	ENSRNOT00000 083778.1	Esam	ENSRNOG00 000033217	endothelial cell adhesion molecule Source RGD Symbol Acc 1303286
D05	UPFR1091423	ENSRNOT00000 006141.5	F11r	ENSRNOG00 000004414	F11 receptor Source RGD Symbol Acc 621842
D06	UPFR1071302	ENSRNOT00000 091004.1	Gnai1	ENSRNOG00 000057096	G protein subunit alpha i1 Source RGD Symbol Acc 2713
D07	UPFR1040861	ENSRNOT00000 022550.6	Gnai2	ENSRNOG00 000016592	G protein subunit alpha i2 Source RGD Symbol Acc 620243
D08	UPFR1081475	ENSRNOT00000 027677.5	Gsk3a	ENSRNOG00 000020417	glycogen synthase kinase 3 alpha Source RGD Symbol Acc 620351
D09	UPFR1109626	ENSRNOT00000 077612.1	Gsk3b	ENSRNOG00 000002833	glycogen synthase kinase 3 beta Source RGD Symbol Acc 70982
D10	UPFR1039255	ENSRNOT00000 003326.5	Hcls1	ENSRNOG00 000038881	hematopoietic cell specific Lyn substrate 1 Source RGD Symbol Acc 1304754
D11	UPFR1031281	ENSRNOT00000 028066.5	Icam1	ENSRNOG00 000020679	intercellular adhesion molecule 1 Source RGD Symbol Acc 2857
D12	UPFR1033031	ENSRNOT00000 035474.3	Icam2	ENSRNOG00 000025143	intercellular adhesion molecule 2 Source RGD Symbol Acc 1359660
E01	UPFR1118308	ENSRNOT00000 025906.4	Ilk	ENSRNOG00 000018993	integrin-linked kinase Source RGD Symbol Acc 620063
E02	UPFR1094033	ENSRNOT00000 012247.4	Jam3	ENSRNOG00 000009149	junctional adhesion molecule 3 Source RGD Symbol Acc 1303248
E03	UPFR1078742	ENSRNOT00000 005366.5	Llg1	ENSRNOG00 000003948	LLGL scribble cell polarity complex component 1 Source RGD Symbol Acc 3012
E04	UPFR1106897	ENSRNOT00000 080714.1	Llg2	ENSRNOG00 000004834	LLGL scribble cell polarity complex component 2 Source RGD Symbol Acc 1560307
E05	UPFR1068299	ENSRNOT00000 032566.6	Igsf5	ENSRNOG00 000028216	immunoglobulin superfamily, member 5 Source RGD Symbol Acc 1359642
E06	UPFR1066204	ENSRNOT00000 066643.3	Magi2	ENSRNOG00 000013962	membrane associated guanylate kinase, WW and PDZ domain containing 2 Source RGD Symbol Acc 621855
E07	UPFR1086352	ENSRNOT00000 026952.6	Magi3	ENSRNOG00 000019885	membrane associated guanylate kinase, WW and PDZ domain containing 3 Source RGD Symbol Acc 621362
E08	UPFR1039802	ENSRNOT00000 091990.1	Mark2	ENSRNOG00 000021184	microtubule affinity regulating kinase 2 Source RGD Symbol Acc 708483
E09	UPFR1098651	ENSRNOT00000 032667.7	Afdn	ENSRNOG00 000023753	afadin, adherens junction formation factor Source RGD Symbol Acc 708561
E10	UPFR1036304	ENSRNOT00000 089235.1	Mpdz	ENSRNOG00 000007894	multiple PDZ domain crumbs cell polarity complex component Source RGD Symbol Acc 3105
E11	UPFR1073048	ENSRNOT00000 012005.5	Mpp5	ENSRNOG00 000008788	membrane palmitoylated protein 5 Source RGD Symbol Acc 1308071
E12	UPFR1105959	ENSRNOT00000 089973.1	Mpp6	ENSRNOG00 000021579	membrane palmitoylated protein 6 Source RGD Symbol Acc 1311833
F01	UPFR1027887	ENSRNOT00000 084667.1	Ocln	ENSRNOG00 000018297	occludin Source RGD Symbol Acc 620089
F02	UPFR1016407	ENSRNOT00000 042623.4	Pard3	ENSRNOG00 000032437	par-3 family cell polarity regulator Source RGD Symbol Acc 620374
F03	UPFR1121580	ENSRNOT00000 044971.3	Pard6a	ENSRNOG00 000017746	par-6 family cell polarity regulator alpha Source RGD Symbol Acc 1303273
F04	UPFR1094887	ENSRNOT00000 014568.4	Pard6b	ENSRNOG00 000010883	par-6 family cell polarity regulator beta Source RGD Symbol Acc 1308205
F05	UPFR1120200	ENSRNOT00000 021135.6	Epcam	ENSRNOG00 000015667	epithelial cell adhesion molecule Source RGD Symbol Acc 621365
F06	UPFR1099138	ENSRNOT00000 012924.5	Prkci	ENSRNOG00 000009652	protein kinase C, iota Source RGD Symbol Acc 620961
F07	UPFR1112897	ENSRNOT00000 021285.6	Prkcz	ENSRNOG00 000015480	protein kinase C, zeta Source RGD Symbol Acc 3399
F08	UPFR1043890	ENSRNOT00000 028143.3	Pten	ENSRNOG00 000020723	phosphatase and tensin homolog Source RGD Symbol Acc 61995
F09	UPFR1019271	ENSRNOT00000 001417.5	Rac1	ENSRNOG00 000001068	Rac family small GTPase 1 Source RGD Symbol Acc 619755
F10	UPFR1020568	ENSRNOT00000 082989.1	Smurf1	ENSRNOG00 000000999	SMAD specific E3 ubiquitin protein ligase 1 Source RGD Symbol Acc 1594738

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFR1119707	ENSRNOT00000071664.2	Rhoa	ENSRNOG0000050519	ras homolog family member A Source RGD Symbol Acc 619921
F12	UPFR1079248	ENSRNOT00000066509.4	Spta1	ENSRNOG0000003537	spectrin, alpha, erythrocytic 1 Source RGD Symbol Acc 1305194
G01	UPFR1028773	ENSRNOT00000082672.1	Sptan1	ENSRNOG0000015396	spectrin, alpha, non-erythrocytic 1 Source RGD Symbol Acc 621714
G02	UPFR1114691	ENSRNOT00000009028.7	Sptb	ENSRNOG0000006911	spectrin, beta, erythrocytic Source RGD Symbol Acc 1303243
G03	UPFR1043318	ENSRNOT00000083528.1	Sptbn1	ENSRNOG0000005434	spectrin, beta, non-erythrocytic 1 Source RGD Symbol Acc 727922
G04	UPFR1102219	ENSRNOT00000088288.1	Sptbn2	ENSRNOG0000058842	spectrin, beta, non-erythrocytic 2 Source RGD Symbol Acc 3751
G05	UPFR1087045	ENSRNOT00000077651.1	Sptbn4	ENSRNOG0000055371	spectrin, beta, non-erythrocytic 4 Source RGD Symbol Acc 1304682
G06	UPFR1055033	ENSRNOT00000084985.1	Sympk	ENSRNOG0000014353	symplekin Source RGD Symbol Acc 1306735
G07	UPFR1074589	ENSRNOT00000046486.5	Tiam1	ENSRNOG0000021569	T-cell lymphoma invasion and metastasis 1 Source RGD Symbol Acc 1307455
G08	UPFR1033943	ENSRNOT00000025660.5	Tjap1	ENSRNOG0000018980	tight junction associated protein 1 Source RGD Symbol Acc 1308708
G09	UPFR1053688	ENSRNOT00000014988.7	Tjp1	ENSRNOG0000011077	tight junction protein 1 Source RGD Symbol Acc 1306305
G10	UPFR1033687	ENSRNOT00000065921.3	Tjp2	ENSRNOG0000015030	tight junction protein 2 Source RGD Symbol Acc 619807
G11	UPFR1073915	ENSRNOT00000089004.1	Tjp3	ENSRNOG0000020501	tight junction protein 3 Source RGD Symbol Acc 1309247
G12	UPFR1029860	ENSRNOT00000020681.6	Vapa	ENSRNOG0000014765	VAMP associated protein A Source RGD Symbol Acc 61803
H01	UPFR1132952	ENSRNOT00000080216.1	Actb	ENSRNOG0000034254	actin, beta Source RGD Symbol Acc 628837
H02	UPFR1132953	ENSRNOT00000023017.5	B2m	ENSRNOG0000017123	beta-2 microglobulin Source RGD Symbol Acc 2189
H03	UPFR1132959	ENSRNOT00000065935.3	Hprt1	ENSRNOG0000048561	hypoxanthine phosphoribosyltransferase 1 Source RGD Symbol Acc 2826
H04	UPFR1018740	ENSRNOT00000017468.2	Ldha	ENSRNOG0000013009	lactate dehydrogenase A Source RGD Symbol Acc 2996
H05	UPFR1132958	ENSRNOT00000018820.5	Rplp1	ENSRNOG0000013874	ribosomal protein lateral stalk subunit P1 Source RGD Symbol Acc 621774
H06	UPFR1126610	UPL_RGDC	RGDC	UPL_RGDC	Rat 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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