

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

## Rat Toll-Like Receptor Signaling Pathway

Cat. no. 249955 UPRN-018ZA

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 (96-well): QuantiNova LNA Probe PCR Focus Panel

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. 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
<b>A</b>	Btk	Casp8	Ccl2	Ccl14	Cd180	Cd80	Cd86	Cebpb	Chuk	Clec4e	Csf2	Csf3
<b>B</b>	Cxcl10	Elf2ak2	Fadd	Fos	AABR0703521 8.1	Hras	Hspa1a	Hspd1	Ifna5	Ifnb1	Ifng	Ikbkb
<b>C</b>	Il10	Il12a	Il1a	Il1b	Il1r1	Il2	Il6	Il6r	Irak1	Irak2	Irf1	Irf3
<b>D</b>	Jun	Kcrnb8	Lta	Ly86	Mal	Map2k3	Map2k4	Map3k1	LOC1009107 71	Map4k4	Mapk8	Mapk8ip3
<b>E</b>	Mapk9	Myd88	Nfkb1	Nfkb2	Nfkbia	Nfkbib	Nfkbil1	Nfkb	Nr2c2	Peli1	Pglyrp1	Ppara
<b>F</b>	Ptgs2	Rel	Rela	Ripk2	AABR0703148 0.1	Sarm1	Tbk1	Ticam2	Tlr1	Tlr2	Tlr3	Tlr4
<b>G</b>	Tlr5	Tlr6	Tlr7	Tlr9	LOC1036943 80	Tnfrsf1a	Tnip2	Tollip	Tradd	Traf6	Ube2n	LOC1009126 18
<b>H</b>	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	UPFR1121716	ENSRNOT00000077547.1	Btk	ENSRNOG0000052407	Bruton tyrosine kinase Source RGD Symbol Acc 1359683
A02	UPFR1030636	ENSRNOT00000016613.4	Casp8	ENSRNOG0000012331	caspase 8 Source RGD Symbol Acc 620945
A03	UPFR1014050	ENSRNOT00000009448.3	Ccl2	ENSRNOG0000007159	C-C motif chemokine ligand 2 Source RGD Symbol Acc 3645
A04	UPFR1097993	ENSRNOT00000023977.6	Cd14	ENSRNOG0000017819	CD14 molecule Source RGD Symbol Acc 620588
A05	UPFR1012849	ENSRNOT00000013768.5	Cd180	ENSRNOG0000010266	CD180 molecule Source RGD Symbol Acc 1308170
A06	UPFR1064878	ENSRNOT00000089625.1	Cd80	ENSRNOG0000001527	Cd80 molecule Source RGD Symbol Acc 2314
A07	UPFR1107778	ENSRNOT00000078936.1	Cd86	ENSRNOG0000038835	CD86 molecule Source RGD Symbol Acc 628714
A08	UPFR1126579	ENSRNOT00000083876.1	Cebpb	ENSRNOG0000057347	CCAAT/enhancer binding protein beta Source RGD Symbol Acc 2327
A09	UPFR1110725	ENSRNOT00000030782.4	Chuk	ENSRNOG0000022485	conserved helix-loop-helix ubiquitous kinase Source RGD Symbol Acc 1306661
A10	UPFR1096678	ENSRNOT00000078725.1	Clec4e	ENSRNOG0000061394	C-type lectin domain family 4, member E Source RGD Symbol Acc 1359298
A11	UPFR1084630	ENSRNOT00000032333.3	Csf2	ENSRNOG0000026805	colony stimulating factor 2 Source RGD Symbol Acc 621065
A12	UPFR1037448	ENSRNOT00000011509.3	Csf3	ENSRNOG0000008525	colony stimulating factor 3 Source RGD Symbol Acc 2426
B01	UPFR1049597	ENSRNOT00000003075.7	Cxcl10	ENSRNOG0000022256	C-X-C motif chemokine ligand 10 Source RGD Symbol Acc 620209
B02	UPFR1062762	ENSRNOT00000072810.2	Eif2ak2	ENSRNOG0000048315	eukaryotic translation initiation factor 2-alpha kinase 2 Source RGD Symbol Acc 3402
B03	UPFR1101946	ENSRNOT00000075089.3	Fadd	ENSRNOG0000047035	Fas associated via death domain Source RGD Symbol Acc 628700
B04	UPFR1045359	ENSRNOT00000010712.3	Fos	ENSRNOG0000008015	Fos proto-oncogene, AP-1 transcription factor subunit Source RGD Symbol Acc 2626
B05	UPFR1108191	ENSRNOT00000047163.4	AABR07035218.1	ENSRNOG0000029813	
B06	UPFR1076419	ENSRNOT00000022363.6	Hras	ENSRNOG0000016611	HRas proto-oncogene, GTPase Source RGD Symbol Acc 2827
B07	UPFR1057108	ENSRNOT00000081924.1	Hspa1a	ENSRNOG0000050647	heat shock protein family A (Hsp70) member 1B Source RGD Symbol Acc 2840
B08	UPFR1095647	ENSRNOT00000066589.2	Hspd1	ENSRNOG0000014525	heat shock protein family D member 1 Source RGD Symbol Acc 621314
B09	UPFR1014391	ENSRNOT00000049705.1	Ifna5	ENSRNOG0000031046	interferon, alpha 5 Source RGD Symbol Acc 1359312
B10	UPFR1098156	ENSRNOT00000008224.2	Ifnb1	ENSRNOG0000006268	interferon beta 1 Source RGD Symbol Acc 2865
B11	UPFR1084134	ENSRNOT00000009919.2	Ifng	ENSRNOG0000007468	interferon gamma Source RGD Symbol Acc 2866
B12	UPFR1104220	ENSRNOT00000025851.4	Ikbbk	ENSRNOG0000019073	inhibitor of nuclear factor kappa B kinase subunit beta Source RGD Symbol Acc 621375
C01	UPFR1113235	ENSRNOT00000006246.5	Il10	ENSRNOG0000004647	interleukin 10 Source RGD Symbol Acc 2886
C02	UPFR1065603	ENSRNOT00000012831.3	Il12a	ENSRNOG0000009468	interleukin 12A Source RGD Symbol Acc 620562
C03	UPFR1066959	ENSRNOT00000080818.1	Il1a	ENSRNOG0000004575	interleukin 1 alpha Source RGD Symbol Acc 2890
C04	UPFR1121351	ENSRNOT00000006308.4	Il1b	ENSRNOG0000004649	interleukin 1 beta Source RGD Symbol Acc 2891
C05	UPFR1025024	ENSRNOT00000082146.1	Il1r1	ENSRNOG0000014504	interleukin 1 receptor type 1 Source RGD Symbol Acc 2892
C06	UPFR1070791	ENSRNOT00000023327.2	Il2	ENSRNOG0000017348	interleukin 2 Source RGD Symbol Acc 620047
C07	UPFR1098910	ENSRNOT00000013732.6	Il6	ENSRNOG0000010278	interleukin 6 Source RGD Symbol Acc 2901
C08	UPFR1035332	ENSRNOT00000028234.7	Il6r	ENSRNOG0000020811	interleukin 6 receptor Source RGD Symbol Acc 2902
C09	UPFR1054336	ENSRNOT00000092207.1	Irak1	ENSRNOG0000060869	interleukin-1 receptor-associated kinase 1 Source RGD Symbol Acc 1563841
C10	UPFR1064642	ENSRNOT00000029819.4	Irak2	ENSRNOG0000021817	interleukin-1 receptor-associated kinase 2 Source RGD Symbol Acc 1309584
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFR1043289	010968.6	Irf1	000008144	interferon regulatory factor 1 Source RGD Symbol Acc 2920
C12	UPFR1094379	ENSRNOT00000 027786.6	Irf3	ENSRNOG00 000043388	interferon regulatory factor 3 Source RGD Symbol Acc 1549774
D01	UPFR1037970	ENSRNOT00000 011731.3	Jun	ENSRNOG00 000026293	Jun proto-oncogene, AP-1 transcription factor subunit Source RGD Symbol Acc 2943
D02	UPFR1013403	ENSRNOT00000 087331.1	Kcnh8	ENSRNOG00 000058626	potassium voltage-gated channel subfamily H member 8 Source RGD Symbol Acc 2549
D03	UPFR1116910	ENSRNOT00000 088936.1	Lta	ENSRNOG00 000000838	lymphotoxin alpha Source RGD Symbol Acc 3020
D04	UPFR1083604	ENSRNOT00000 000149.6	Ly86	ENSRNOG00 000000137	lymphocyte antigen 86 Source RGD Symbol Acc 1309936
D05	UPFR1113824	ENSRNOT00000 020870.2	Mal	ENSRNOG00 000015445	mal, T-cell differentiation protein Source RGD Symbol Acc 3037
D06	UPFR1058261	ENSRNOT00000 073792.2	Map2k3	ENSRNOG00 000049132	mitogen activated protein kinase kinase 3 Source RGD Symbol Acc 1306620
D07	UPFR1096951	ENSRNOT00000 005293.7	Map2k4	ENSRNOG00 000003834	mitogen activated protein kinase kinase 4 Source RGD Symbol Acc 1307040
D08	UPFR1044671	ENSRNOT00000 017968.3	Map3k1	ENSRNOG00 000013177	mitogen-activated protein kinase kinase kinase 1 Source RGD Symbol Acc 620966
D09	UPFR1103973	ENSRNOT00000 007654.5	LOC10091 0771	ENSRNOG00 000005724	mitogen-activated protein kinase kinase kinase 7-like Source RGD Symbol Acc 6496502
D10	UPFR1050792	ENSRNOT00000 019180.6	Map4k4	ENSRNOG00 000014013	mitogen-activated protein kinase kinase kinase kinase 4 Source RGD Symbol Acc 1305322
D11	UPFR1048766	ENSRNOT00000 065216.3	Mapk8	ENSRNOG00 000020155	mitogen-activated protein kinase 8 Source RGD Symbol Acc 621506
D12	UPFR1071416	ENSRNOT00000 042066.3	Mapk8ip3	ENSRNOG00 000033568	mitogen-activated protein kinase 8 interacting protein 3 Source RGD Symbol Acc 1563691
E01	UPFR1038865	ENSRNOT00000 083688.1	Mapk9	ENSRNOG00 000002823	mitogen-activated protein kinase 9 Source RGD Symbol Acc 628847
E02	UPFR1120879	ENSRNOT00000 018341.5	Myd88	ENSRNOG00 000013634	MYD88, innate immune signal transduction adaptor Source RGD Symbol Acc 735043
E03	UPFR1116688	ENSRNOT00000 036838.4	Nfkb1	ENSRNOG00 000023258	nuclear factor kappa B subunit 1 Source RGD Symbol Acc 70498
E04	UPFR1025860	ENSRNOT00000 026235.3	Nfkb2	ENSRNOG00 000019311	nuclear factor kappa B subunit 2 Source RGD Symbol Acc 1307189
E05	UPFR1024664	ENSRNOT00000 009894.6	Nfkbia	ENSRNOG00 000007390	NFKB inhibitor alpha Source RGD Symbol Acc 3171
E06	UPFR1013391	ENSRNOT00000 027212.5	Nfkbib	ENSRNOG00 000020063	NFKB inhibitor beta Source RGD Symbol Acc 621887
E07	UPFR1052400	ENSRNOT00000 090028.1	Nfkbil1	ENSRNOG00 000000839	NFKB inhibitor like 1 Source RGD Symbol Acc 1303310
E08	UPFR1091437	ENSRNOT00000 083659.1	Nfrkb	ENSRNOG00 000008278	nuclear factor related to kappa B binding protein Source RGD Symbol Acc 1310558
E09	UPFR1051819	ENSRNOT00000 014353.5	Nr2c2	ENSRNOG00 000010536	nuclear receptor subfamily 2, group C, member 2 Source RGD Symbol Acc 3201
E10	UPFR1098450	ENSRNOT00000 009319.5	Peli1	ENSRNOG00 000006329	pellino E3 ubiquitin protein ligase 1 Source RGD Symbol Acc 1311199
E11	UPFR1052792	ENSRNOT00000 018233.3	Pglyrp1	ENSRNOG00 000013395	peptidoglycan recognition protein 1 Source RGD Symbol Acc 621429
E12	UPFR1039308	ENSRNOT00000 030082.2	Ppara	ENSRNOG00 000021463	peroxisome proliferator activated receptor alpha Source RGD Symbol Acc 3369
F01	UPFR1035449	ENSRNOT00000 003567.4	Ptgs2	ENSRNOG00 000002525	prostaglandin-endoperoxide synthase 2 Source RGD Symbol Acc 620349
F02	UPFR1066569	ENSRNOT00000 081077.1	Rel	ENSRNOG00 000054437	REL proto-oncogene, NF-kB subunit Source RGD Symbol Acc 1311231
F03	UPFR1070877	ENSRNOT00000 045233.3	Rela	ENSRNOG00 000030888	RELA proto-oncogene, NF-kB subunit Source RGD Symbol Acc 727889
F04	UPFR1074419	ENSRNOT00000 012963.5	Ripk2	ENSRNOG00 000009389	receptor-interacting serine-threonine kinase 2 Source RGD Symbol Acc 1309167
F05	UPFR1117016	ENSRNOT00000 021061.6	AABR0703 1480.1	ENSRNOG00 000015645	
F06	UPFR1106048	ENSRNOT00000 013639.5	Sarm1	ENSRNOG00 000010244	sterile alpha and TIR motif containing 1 Source RGD Symbol Acc 1310078
F07	UPFR1076485	ENSRNOT00000 009260.5	Tbk1	ENSRNOG00 000005528	TANK-binding kinase 1 Source RGD Symbol Acc 1588588
F08	UPFR1029946	ENSRNOT00000 059466.2	Ticam2	ENSRNOG00 000042070	toll-like receptor adaptor molecule 2 Source RGD Symbol Acc 1308258
F09	UPFR1066076	ENSRNOT00000 059124.3	Tlr1	ENSRNOG00 000038722	toll-like receptor 1 Source MGI Symbol Acc MGI 1341295
F10	UPFR1061984	ENSRNOT00000 013025.4	Tlr2	ENSRNOG00 000009822	toll-like receptor 2 Source RGD Symbol Acc 735138

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFR1036867	ENSRNOT00000087986.1	Tlr3	ENSRNOG00000021726	toll-like receptor 3 Source RGD Symbol Acc 735171
F12	UPFR1020675	ENSRNOT00000014020.3	Tlr4	ENSRNOG00000010522	toll-like receptor 4 Source RGD Symbol Acc 3870
G01	UPFR1117112	ENSRNOT00000004821.4	Tlr5	ENSRNOG00000022067	toll-like receptor 5 Source RGD Symbol Acc 631351
G02	UPFR1064975	ENSRNOT00000002933.5	Tlr6	ENSRNOG0000002161	toll-like receptor 6 Source RGD Symbol Acc 1303030
G03	UPFR1122279	ENSRNOT00000005620.6	Tlr7	ENSRNOG0000004249	toll-like receptor 7 Source RGD Symbol Acc 1563357
G04	UPFR1099903	ENSRNOT00000074194.1	Tlr9	ENSRNOG00000048161	toll-like receptor 9 Source RGD Symbol Acc 631352
G05	UPFR1098022	ENSRNOT00000079677.1	LOC103694380	ENSRNOG00000055156	tumor necrosis factor-like Source RGD Symbol Acc 9404643
G06	UPFR1079067	ENSRNOT00000048529.4	Tnfrsf1a	ENSRNOG00000031312	TNF receptor superfamily member 1A Source RGD Symbol Acc 621237
G07	UPFR1017434	ENSRNOT00000018477.6	Tnip2	ENSRNOG00000013805	TNFAIP3 interacting protein 2 Source RGD Symbol Acc 1307717
G08	UPFR1079309	ENSRNOT00000046344.3	Tollip	ENSRNOG00000019861	toll interacting protein Source RGD Symbol Acc 1304676
G09	UPFR1034627	ENSRNOT00000020405.6	Tradd	ENSRNOG00000015179	TNFRSF1A-associated via death domain Source RGD Symbol Acc 621313
G10	UPFR1106871	ENSRNOT00000006148.5	Traf6	ENSRNOG00000004639	TNF receptor associated factor 6 Source RGD Symbol Acc 1306853
G11	UPFR1074341	ENSRNOT00000089874.1	Ube2n	ENSRNOG00000058053	ubiquitin-conjugating enzyme E2N Source RGD Symbol Acc 621096
G12	UPFR1036700	ENSRNOT00000035048.4	LOC100912618	ENSRNOG00000025580	similar to ubiquitin-conjugating enzyme E2 variant 1 Source RGD Symbol Acc 1587144
H01	UPFR1132952	ENSRNOT00000080216.1	Actb	ENSRNOG00000034254	actin, beta Source RGD Symbol Acc 628837
H02	UPFR1132953	ENSRNOT00000023017.5	B2m	ENSRNOG00000017123	beta-2 microglobulin Source RGD Symbol Acc 2189
H03	UPFR1132959	ENSRNOT00000065935.3	Hprt1	ENSRNOG00000048561	hypoxanthine phosphoribosyltransferase 1 Source RGD Symbol Acc 2826
H04	UPFR1018740	ENSRNOT00000017468.2	Ldha	ENSRNOG00000013009	lactate dehydrogenase A Source RGD Symbol Acc 2996
H05	UPFR1132958	ENSRNOT00000018820.5	Rplp1	ENSRNOG00000013874	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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