

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

Human Glucose Metabolism

Cat. no. 249955 UPHS-006ZA

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 for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
A	ACLY	ACO1	ACO2	AGL	ALDOA	ALDOB	ALDOC	BPGM	CS	DLAT	DLD	DLST
B	ENO1	ENO2	ENO3	FBP1	FBP2	FH	G6PC	G6PC3	G6PD	GALM	GBE1	GCK
C	GPI	GSK3A	GSK3B	GYS1	GYS2	H6PD	HK2	HK3	IDH1	IDH2	IDH3A	IDH3B
D	IDH3G	MDH1	MDH1B	MDH2	OGDH	PC	PCK1	PCK2	PDHA1	PDHB	PDK1	PDK2
E	PDK3	PDK4	PDP2	PDPR	PFKL	PGAM2	PGK1	PGK2	PGLS	PGM1	PGM2	PGM3
F	PHKA1	PHKB	PHKG1	PHKG2	PKLR	PRPS1	PRPS1L1	PRPS2	PYGL	PYGM	RBKS	RPE
G	RPIA	SDHA	SDHB	SDHC	SDHD	SUCLA2	SUCLG1	SUCLG2	TALDO1	TKT	TPH1	UGP2
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	UPFH1132862	ENST00000537919.5	ACLY	ENSG00000131473	ATP citrate lyase Source HGNC Symbol Acc HGNC 115
A02	UPFH0112064	ENST00000379923.5	ACO1	ENSG00000122729	aconitase 1 Source HGNC Symbol Acc HGNC 117
A03	UPFH1132211	ENST00000216254.9	ACO2	ENSG00000100412	aconitase 2 Source HGNC Symbol Acc HGNC 118
A04	UPFH0155164	ENST00000361302.7	AGL	ENSG00000162688	amylase-1, 6-glycosidase, 4-alpha-glucanotransferase Source HGNC Symbol Acc HGNC 321
A05	UPFH0184034	ENST00000564688.1	ALDOA	ENSG00000149925	aldolase, fructose-bisphosphate A Source HGNC Symbol Acc HGNC 414
A06	UPFH0119434	ENST00000374855.8	ALDOB	ENSG00000136872	aldolase, fructose-bisphosphate B Source HGNC Symbol Acc HGNC 417
A07	UPFH1132225	ENST00000395321.6	ALDOC	ENSG00000109107	aldolase, fructose-bisphosphate C Source HGNC Symbol Acc HGNC 418
A08	UPFH1132278	ENST00000344924.8	BPGM	ENSG00000172331	bisphosphoglycerate mutase Source HGNC Symbol Acc HGNC 1093
A09	UPFH1132337	ENST00000549221.5	CS	ENSG00000062485	citrate synthase Source HGNC Symbol Acc HGNC 2422
A10	UPFH0331967	ENST00000280346.10	DLAT	ENSG00000150768	dihydrolipoamide S-acetyltransferase Source HGNC Symbol Acc HGNC 2896
A11	UPFH1132362	ENST00000205402.10	DLD	ENSG00000091140	dihydrolipoamide dehydrogenase Source HGNC Symbol Acc HGNC 2898
A12	UPFH1132363	ENST00000334220.9	DLST	ENSG00000119689	dihydrolipoamide S-succinyltransferase Source HGNC Symbol Acc HGNC 2911
B01	UPFH0404044	ENST00000234590.10	ENO1	ENSG00000074800	enolase 1 Source HGNC Symbol Acc HGNC 3350
B02	UPFH1132384	ENST00000541477.5	ENO2	ENSG00000111674	enolase 2 Source HGNC Symbol Acc HGNC 3353
B03	UPFH1132385	ENST00000518175.1	ENO3	ENSG00000108515	enolase 3 Source HGNC Symbol Acc HGNC 3354
B04	UPFH1132397	ENST00000415431.5	FBP1	ENSG00000165140	fructose-bisphosphatase 1 Source HGNC Symbol Acc HGNC 3606
B05	UPFH0501719	ENST00000375337.4	FBP2	ENSG00000130957	fructose-bisphosphatase 2 Source HGNC Symbol Acc HGNC 3607
B06	UPFH0506940	ENST00000366560.3	FH	ENSG00000091483	fumarate hydratase Source HGNC Symbol Acc HGNC 3700
B07	UPFH0468561	ENST00000253801.6	G6PC	ENSG00000131482	glucose-6-phosphatase catalytic subunit Source HGNC Symbol Acc HGNC 4056
B08	UPFH0259256	ENST00000269097.8	G6PC3	ENSG00000141349	glucose-6-phosphatase catalytic subunit 3 Source HGNC Symbol Acc HGNC 24861
B09	UPFH0397211	ENST00000621232.5	G6PD	ENSG00000160211	glucose-6-phosphate dehydrogenase Source HGNC Symbol Acc HGNC 4057
B10	UPFH1132907	ENST00000434934.1	GALM	ENSG00000143891	galactose mutarotase Source HGNC Symbol Acc HGNC 24063
B11	UPFH1132417	ENST00000489715.1	GBE1	ENSG00000114480	1,4-alpha-glucan branching enzyme 1 Source HGNC Symbol Acc HGNC 4180
B12	UPFH0335565	ENST00000395796.7	GCK	ENSG00000106633	glucokinase Source HGNC Symbol Acc HGNC 4195
C01	UPFH0554980	ENST00000644934.1	GPI	ENSG00000105220	glucose-6-phosphate isomerase Source HGNC Symbol Acc HGNC 4458
C02	UPFH1132428	ENST00000398249.8	GSK3A	ENSG00000105723	glycogen synthase kinase 3 alpha Source HGNC Symbol Acc HGNC 4616
C03	UPFH0470775	ENST00000316626.5	GSK3B	ENSG00000082701	glycogen synthase kinase 3 beta Source HGNC Symbol Acc HGNC 4617
C04	UPFH1132433	ENST00000323798.8	GYS1	ENSG00000104812	glycogen synthase 1 Source HGNC Symbol Acc HGNC 4706
C05	UPFH0433307	ENST00000261195.2	GYS2	ENSG00000111713	glycogen synthase 2 Source HGNC Symbol Acc HGNC 4707
C06	UPFH1132909	ENST00000377403.6	H6PD	ENSG00000049239	hexose-6-phosphate dehydrogenase/glucose 1-dehydrogenase Source HGNC Symbol Acc HGNC 4795
C07	UPFH1132910	ENST00000409174.1	HK2	ENSG00000159399	hexokinase 2 Source HGNC Symbol Acc HGNC 4923
C08	UPFH0384616	ENST00000506834.5	HK3	ENSG00000160883	hexokinase 3 Source HGNC Symbol Acc HGNC 4925
C09	UPFH0085503	ENST00000345146.6	IDH1	ENSG00000138413	isocitrate dehydrogenase (NADP(+)) 1, cytosolic Source HGNC Symbol Acc HGNC 5382
C10	UPFH1132465	ENST00000559482.5	IDH2	ENSG00000182054	isocitrate dehydrogenase (NADP(+)) 2, mitochondrial Source HGNC Symbol Acc HGNC 5383
		ENST00000559		ENSG000000	isocitrate dehydrogenase 3 (NAD(+)) alpha Source HGNC Symbol Acc HGNC

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFH1132872	881.5	IDH3A	166411	5384
C12	UPFH1132466	ENST00000380851.9	IDH3B	ENSG00000101365	isocitrate dehydrogenase 3 (NAD(+)) beta Source HGNC Symbol Acc HGNC 5385
D01	UPFH0528361	ENST00000307092.7	IDH3G	ENSG00000067829	isocitrate dehydrogenase 3 (NAD(+)) gamma Source HGNC Symbol Acc HGNC 5386
D02	UPFH1132543	ENST00000432309.5	MDH1	ENSG00000014641	malate dehydrogenase 1 Source HGNC Symbol Acc HGNC 6970
D03	UPFH1132544	ENST00000454776.6	MDH1B	ENSG00000013840	malate dehydrogenase 1B Source HGNC Symbol Acc HGNC 17836
D04	UPFH1132545	ENST00000432020.2	MDH2	ENSG00000014670	malate dehydrogenase 2 Source HGNC Symbol Acc HGNC 6971
D05	UPFH0111093	ENST00000419661.5	OGDH	ENSG00000010595	oxoglutarate dehydrogenase Source HGNC Symbol Acc HGNC 8124
D06	UPFH1132605	ENST00000393958.7	PC	ENSG00000017359	pyruvate carboxylase Source HGNC Symbol Acc HGNC 8636
D07	UPFH1132606	ENST00000319441.6	PCK1	ENSG00000012425	phosphoenolpyruvate carboxykinase 1 Source HGNC Symbol Acc HGNC 8724
D08	UPFH0165951	ENST00000216780.8	PCK2	ENSG00000010088	phosphoenolpyruvate carboxykinase 2, mitochondrial Source HGNC Symbol Acc HGNC 8725
D09	UPFH0194717	ENST00000481733.1	PDHA1	ENSG00000013182	pyruvate dehydrogenase E1 alpha 1 subunit Source HGNC Symbol Acc HGNC 8806
D10	UPFH1132882	ENST00000383714.8	PDHB	ENSG00000016829	pyruvate dehydrogenase E1 beta subunit Source HGNC Symbol Acc HGNC 8808
D11	UPFH0435270	ENST00000410055.5	PDK1	ENSG00000015225	pyruvate dehydrogenase kinase 1 Source HGNC Symbol Acc HGNC 8809
D12	UPFH0118282	ENST00000503176.5	PDK2	ENSG00000000588	pyruvate dehydrogenase kinase 2 Source HGNC Symbol Acc HGNC 8810
E01	UPFH0149880	ENST00000379162.8	PDK3	ENSG00000006799	pyruvate dehydrogenase kinase 3 Source HGNC Symbol Acc HGNC 8811
E02	UPFH1132611	ENST00000005178.6	PDK4	ENSG00000000479	pyruvate dehydrogenase kinase 4 Source HGNC Symbol Acc HGNC 8812
E03	UPFH0272063	ENST00000311765.3	PDP2	ENSG00000017284	pyruvate dehydrogenase phosphatase catalytic subunit 2 Source HGNC Symbol Acc HGNC 30263
E04	UPFH0159737	ENST00000288050.8	PDPR	ENSG00000009085	pyruvate dehydrogenase phosphatase regulatory subunit Source HGNC Symbol Acc HGNC 30264
E05	UPFH1132615	ENST00000349048.9	PFKL	ENSG00000014195	phosphofructokinase, liver type Source HGNC Symbol Acc HGNC 8876
E06	UPFH0051057	ENST00000297283.4	PGAM2	ENSG00000016470	phosphoglycerate mutase 2 Source HGNC Symbol Acc HGNC 8889
E07	UPFH1132617	ENST00000373316.5	PGK1	ENSG00000010214	phosphoglycerate kinase 1 Source HGNC Symbol Acc HGNC 8896
E08	UPFH1172912	ENST00000304801.5	PGK2	ENSG00000017095	phosphoglycerate kinase 2 Source HGNC Symbol Acc HGNC 8898
E09	UPFH1132618	ENST00000252603.7	PGLS	ENSG00000013031	6-phosphogluconolactonase Source NCBI gene Acc 25796
E10	UPFH0278593	ENST00000650546.1	PGM1	ENSG00000007973	phosphoglucomutase 1 Source HGNC Symbol Acc HGNC 8905
E11	UPFH1132619	ENST00000381967.9	PGM2	ENSG00000016929	phosphoglucomutase 2 Source HGNC Symbol Acc HGNC 8906
E12	UPFH1132620	ENST00000616566.5	PGM3	ENSG00000001337	phosphoglucomutase 3 Source HGNC Symbol Acc HGNC 8907
F01	UPFH0506036	ENST00000373539.3	PHKA1	ENSG00000006717	phosphorylase kinase regulatory subunit alpha 1 Source HGNC Symbol Acc HGNC 8925
F02	UPFH1132621	ENST00000299167.12	PHKB	ENSG00000010289	phosphorylase kinase regulatory subunit beta Source HGNC Symbol Acc HGNC 8927
F03	UPFH0184468	ENST00000297373.6	PHKG1	ENSG00000016477	phosphorylase kinase catalytic subunit gamma 1 Source HGNC Symbol Acc HGNC 8930
F04	UPFH1132622	ENST00000328273.11	PHKG2	ENSG00000015687	phosphorylase kinase catalytic subunit gamma 2 Source HGNC Symbol Acc HGNC 8931
F05	UPFH1132919	ENST00000392414.7	PKLR	ENSG00000014362	pyruvate kinase L/R Source HGNC Symbol Acc HGNC 9020
F06	UPFH1132921	ENST00000372435.9	PRPS1	ENSG00000014722	phosphoribosyl pyrophosphate synthetase 1 Source HGNC Symbol Acc HGNC 9462
F07	UPFH1132639	ENST00000638645.1	PRPS1L1	ENSG00000022993	phosphoribosyl pyrophosphate synthetase 1-like 1 Source HGNC Symbol Acc HGNC 9463
F08	UPFH0235383	ENST00000380668.9	PRPS2	ENSG00000010191	phosphoribosyl pyrophosphate synthetase 2 Source HGNC Symbol Acc HGNC 9465
F09	UPFH1132646	ENST00000544180.6	PYGL	ENSG00000010050	glycogen phosphorylase L Source HGNC Symbol Acc HGNC 9725
F10	UPFH1132647	ENST00000164139.4	PYGM	ENSG00000006897	glycogen phosphorylase, muscle associated Source HGNC Symbol Acc HGNC 9726

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH1132653	ENST00000302188.8	RBKS	ENSG00000171174	ribokinase Source HGNC Symbol Acc HGNC 30325
F12	UPFH1132663	ENST00000436630.6	RPE	ENSG00000197713	ribulose-5-phosphate-3-epimerase Source HGNC Symbol Acc HGNC 10293
G01	UPFH1132664	ENST00000283646.5	RPIA	ENSG00000153574	ribose 5-phosphate isomerase A Source HGNC Symbol Acc HGNC 10297
G02	UPFH1132667	ENST00000504309.5	SDHA	ENSG00000073578	succinate dehydrogenase complex flavoprotein subunit A Source HGNC Symbol Acc HGNC 10680
G03	UPFH0440600	ENST00000375499.7	SDHB	ENSG00000117118	succinate dehydrogenase complex iron sulfur subunit B Source HGNC Symbol Acc HGNC 10681
G04	UPFH0461332	ENST00000367975.6	SDHC	ENSG00000143252	succinate dehydrogenase complex subunit C Source HGNC Symbol Acc HGNC 10682
G05	UPFH1132668	ENST00000528048.5	SDHD	ENSG00000204370	succinate dehydrogenase complex subunit D Source HGNC Symbol Acc HGNC 10683
G06	UPFH0017629	ENST00000378654.8	SUCLA2	ENSG00000136143	succinate-CoA ligase ADP-forming beta subunit Source HGNC Symbol Acc HGNC 11448
G07	UPFH1132701	ENST00000393868.7	SUCLG1	ENSG00000163541	succinate-CoA ligase alpha subunit Source HGNC Symbol Acc HGNC 11449
G08	UPFH0118402	ENST00000307227.9	SUCLG2	ENSG00000172340	succinate-CoA ligase GDP-forming beta subunit Source HGNC Symbol Acc HGNC 11450
G09	UPFH1132704	ENST00000319006.8	TALDO1	ENSG00000177156	transaldolase 1 Source HGNC Symbol Acc HGNC 11559
G10	UPFH1132726	ENST00000423525.6	TKT	ENSG00000163931	transketolase Source HGNC Symbol Acc HGNC 11834
G11	UPFH1132737	ENST00000229270.8	TPI1	ENSG00000111669	triosephosphate isomerase 1 Source HGNC Symbol Acc HGNC 12009
G12	UPFH0283246	ENST00000472047.5	UGP2	ENSG00000169764	UDP-glucose pyrophosphorylase 2 Source HGNC Symbol Acc HGNC 12527
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 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 Probe RT-PCR Kit (100)*	For 100 x 20 μ l reactions: 1 ml QuantiNova Probe RT-PCR Master Mix, 20 μ l QuantiNova Probe 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	208352
QuantiNova Probe PCR Kit (100)*	For 100 x 20 μ l reactions: 1 ml 2x QuantiNova Probe PCR Master Mix, 500 μ l QuantiNova Yellow Template Dilution Buffer, 250 μ 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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