

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

## Human Parkinson's Disease

Cat. no. 249955 UPHS-124ZR

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	ALDH1A1	APC	APP	ATP2B2	ATXN2	ATXN3	BASP1	BDNF	CADPS	CASP1	CASP3	CASP7
B	CASP8	CASP9	CDC27	CDC42	CDH8	CHGB	CUL2	CXCC1	NSG1	DDC	DLK1	DRD2
C	EGLN1	FBXO9	FGF13	FN1	GABBR2	GBE1	GPR37	GRIA3	HSPA4	HTR2A	KCNJ6	LRRK2
D	MAPK9	MAPT	NCOA1	NEFL	NFASC	NR4A2	NRXN3	NSF	NTRK2	OPA1	PAN2	PRKN
E	PARK7	PINK1	PPID	PRDX2	PSEN2	PTEN	RGS4	RTN1	S100B	SEPT5	SKP1	SLC18A2
F	SLC25A4	SLC6A3	SLIT1	SNCA	SPEN	SRSF7	STUB1	SV2B	SYNGR3	SYT1	SYT11	TCF7L2
G	TH	TPBG	UBA1	UBB	UBE2I	UBE2K	UBE2L3	UCHL1	USP34	VAMP1	VDAC3	YWHAZ
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	UPFH0409683	ENST00000482210.5	ALDH1A1	ENSG00000165092	aldehyde dehydrogenase 1 family member A1 Source HGNC Symbol Acc HGNC 402
A02	UPFH1132236	ENST00000257430.9	APC	ENSG00000134982	APC, WNT signaling pathway regulator Source HGNC Symbol Acc HGNC 583
A03	UPFH1132238	ENST00000346798.8	APP	ENSG00000142192	amyloid beta precursor protein Source HGNC Symbol Acc HGNC 620
A04	UPFH0043078	ENST00000383800.8	ATP2B2	ENSG00000157087	ATPase plasma membrane Ca <sup>2+</sup> transporting 2 Source HGNC Symbol Acc HGNC 815
A05	UPFH0126498	ENST00000550104.5	ATXN2	ENSG00000204842	ataxin 2 Source HGNC Symbol Acc HGNC 10555
A06	UPFH0013942	ENST00000502250.5	ATXN3	ENSG00000066427	ataxin 3 Source HGNC Symbol Acc HGNC 7106
A07	UPFH0161676	ENST00000616743.1	BASP1	ENSG00000176788	brain abundant membrane attached signal protein 1 Source HGNC Symbol Acc HGNC 957
A08	UPFH0520944	ENST00000525528.1	BDNF	ENSG00000176697	brain derived neurotrophic factor Source HGNC Symbol Acc HGNC 1033
A09	UPFH0170861	ENST00000383710.9	CADPS	ENSG00000163618	calcium dependent secretion activator Source HGNC Symbol Acc HGNC 1426
A10	UPFH0285144	ENST00000436863.7	CASP1	ENSG00000137752	caspase 1 Source HGNC Symbol Acc HGNC 1499
A11	UPFH1132892	ENST00000523916.5	CASP3	ENSG00000164305	caspase 3 Source HGNC Symbol Acc HGNC 1504
A12	UPFH0495219	ENST00000369318.7	CASP7	ENSG00000165806	caspase 7 Source HGNC Symbol Acc HGNC 1508
B01	UPFH0522971	ENST00000264275.9	CASP8	ENSG00000064012	caspase 8 Source HGNC Symbol Acc HGNC 1509
B02	UPFH0083593	ENST00000440484.1	CASP9	ENSG00000132906	caspase 9 Source HGNC Symbol Acc HGNC 1511
B03	UPFH0259886	ENST00000573550.5	CDC27	ENSG00000004897	cell division cycle 27 Source HGNC Symbol Acc HGNC 1728
B04	UPFH0571108	ENST00000400259.5	CDC42	ENSG00000070831	cell division cycle 42 Source HGNC Symbol Acc HGNC 1736
B05	UPFH0480231	ENST00000583382.1	CDH8	ENSG00000150394	cadherin 8 Source HGNC Symbol Acc HGNC 1767
B06	UPFH0107893	ENST00000378961.9	CHGB	ENSG00000089199	chromogranin B Source HGNC Symbol Acc HGNC 1930
B07	UPFH1132346	ENST00000374746.5	CUL2	ENSG00000108094	cullin 2 Source HGNC Symbol Acc HGNC 2552
B08	UPFH0294563	ENST00000589940.5	CXXC1	ENSG00000154832	CXXC finger protein 1 Source HGNC Symbol Acc HGNC 24343
B09	UPFH0400105	ENST00000433139.6	NSG1	ENSG00000168824	neuronal vesicle trafficking associated 1 Source HGNC Symbol Acc HGNC 18790
B10	UPFH0335012	ENST00000380984.4	DDC	ENSG00000132437	dopa decarboxylase Source HGNC Symbol Acc HGNC 2719
B11	UPFH0142974	ENST00000556051.1	DLK1	ENSG00000185559	delta like non-canonical Notch ligand 1 Source HGNC Symbol Acc HGNC 2907
B12	UPFH0281781	ENST00000540600.5	DRD2	ENSG00000149295	dopamine receptor D2 Source HGNC Symbol Acc HGNC 3023
C01	UPFH0477711	ENST00000366641.3	EGLN1	ENSG00000135766	egl-9 family hypoxia inducible factor 1 Source HGNC Symbol Acc HGNC 1232
C02	UPFH0198866	ENST00000323557.11	FBXO9	ENSG00000112146	F-box protein 9 Source HGNC Symbol Acc HGNC 13588
C03	UPFH0248413	ENST00000305414.8	FGF13	ENSG00000129682	fibroblast growth factor 13 Source HGNC Symbol Acc HGNC 3670
C04	UPFH0605066	ENST00000336916.8	FN1	ENSG00000115414	fibronectin 1 Source HGNC Symbol Acc HGNC 3778
C05	UPFH0092214	ENST00000635462.1	GABBR2	ENSG00000136928	gamma-aminobutyric acid type B receptor subunit 2 Source HGNC Symbol Acc HGNC 4507
C06	UPFH1132417	ENST00000489715.1	GBE1	ENSG00000114480	1,4-alpha-glucan branching enzyme 1 Source HGNC Symbol Acc HGNC 4180
C07	UPFH0340509	ENST00000303921.2	GPR37	ENSG00000170775	G protein-coupled receptor 37 Source HGNC Symbol Acc HGNC 4494
C08	UPFH0324861	ENST00000620581.4	GRIA3	ENSG00000125675	glutamate ionotropic receptor AMPA type subunit 3 Source HGNC Symbol Acc HGNC 4573
C09	UPFH1132457	ENST00000304858.7	HSPA4	ENSG00000170606	heat shock protein family A (Hsp70) member 4 Source HGNC Symbol Acc HGNC 5237
C10	UPFH0492753	ENST00000543956.4	HTR2A	ENSG00000102468	5-hydroxytryptamine receptor 2A Source HGNC Symbol Acc HGNC 5293
		ENST00000645		ENSG000000	potassium voltage-gated channel subfamily J member 6 Source HGNC Symbol

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFH0591146	093.1	KCNJ6	157542	Acc HGNC 6267
C12	UPFH0116694	ENST00000430804.5	LRRK2	ENSG00000188906	leucine rich repeat kinase 2 Source HGNC Symbol Acc HGNC 18618
D01	UPFH0148170	ENST000000397072.7	MAPK9	ENSG00000050748	mitogen-activated protein kinase 9 Source HGNC Symbol Acc HGNC 6886
D02	UPFH0281608	ENST000000571987.5	MAPT	ENSG00000186868	microtubule associated protein tau Source HGNC Symbol Acc HGNC 6893
D03	UPFH0385216	ENST000000406961.5	NCOA1	ENSG00000084676	nuclear receptor coactivator 1 Source HGNC Symbol Acc HGNC 7668
D04	UPFH0382465	ENST000000610854.1	NEFL	ENSG00000277586	neurofilament light Source HGNC Symbol Acc HGNC 7739
D05	UPFH0232618	ENST000000367173.7	NFASC	ENSG00000163531	neurofascin Source HGNC Symbol Acc HGNC 29866
D06	UPFH0459066	ENST000000406048.2	NR4A2	ENSG00000153234	nuclear receptor subfamily 4 group A member 2 Source HGNC Symbol Acc HGNC 7981
D07	UPFH0468577	ENST000000555073.5	NRXN3	ENSG00000021645	neurexin 3 Source HGNC Symbol Acc HGNC 8010
D08	UPFH0168333	ENST000000571864.5	NSF	ENSG00000073969	N-ethylmaleimide sensitive factor, vesicle fusing ATPase Source HGNC Symbol Acc HGNC 8016
D09	UPFH0140055	ENST000000376208.5	NTRK2	ENSG00000148053	neurotrophic receptor tyrosine kinase 2 Source HGNC Symbol Acc HGNC 8032
D10	UPFH0304327	ENST000000361828.7	OPA1	ENSG00000198836	OPA1, mitochondrial dynamin like GTPase Source HGNC Symbol Acc HGNC 8140
D11	UPFH0091622	ENST000000610546.4	PAN2	ENSG00000135473	poly(A) specific ribonuclease subunit PAN2 Source HGNC Symbol Acc HGNC 20074
D12	UPFH0446501	ENST000000366897.5	PRKN	ENSG00000185345	parkin RBR E3 ubiquitin protein ligase Source HGNC Symbol Acc HGNC 8607
E01	UPFH0540710	ENST000000377488.5	PARK7	ENSG00000116288	Parkinsonism associated deglycase Source HGNC Symbol Acc HGNC 16369
E02	UPFH0190097	ENST000000400490.2	PINK1	ENSG00000158828	PTEN induced kinase 1 Source HGNC Symbol Acc HGNC 14581
E03	UPFH0090909	ENST000000307720.4	PPID	ENSG00000171497	peptidylprolyl isomerase D Source HGNC Symbol Acc HGNC 9257
E04	UPFH1132920	ENST000000301522.3	PRDX2	ENSG00000167815	peroxiredoxin 2 Source HGNC Symbol Acc HGNC 9353
E05	UPFH0159620	ENST000000460775.5	PSEN2	ENSG00000143801	presenilin 2 Source HGNC Symbol Acc HGNC 9509
E06	UPFH1132982	ENST000000371953.8	PTEN	ENSG00000171862	phosphatase and tensin homolog Source HGNC Symbol Acc HGNC 9588
E07	UPFH0575434	ENST000000421743.6	RGS4	ENSG00000117152	regulator of G protein signaling 4 Source HGNC Symbol Acc HGNC 10000
E08	UPFH0287903	ENST000000490111.1	RTN1	ENSG00000139970	reticulon 1 Source HGNC Symbol Acc HGNC 10467
E09	UPFH0069870	ENST000000397648.1	S100B	ENSG00000160307	S100 calcium binding protein B Source HGNC Symbol Acc HGNC 10500
E10	UPFH0346765	ENST000000383045.7	SEPT5	ENSG00000184702	septin 5 Source HGNC Symbol Acc HGNC 9164
E11	UPFH0251762	ENST000000517625.5	SKP1	ENSG00000113558	S-phase kinase associated protein 1 Source HGNC Symbol Acc HGNC 10899
E12	UPFH0518421	ENST000000298472.10	SLC18A2	ENSG00000165646	solute carrier family 18 member A2 Source HGNC Symbol Acc HGNC 10935
F01	UPFH0547612	ENST000000281456.11	SLC25A4	ENSG00000151729	solute carrier family 25 member 4 Source HGNC Symbol Acc HGNC 10990
F02	UPFH0386633	ENST000000511750.1	SLC6A3	ENSG00000142319	solute carrier family 6 member 3 Source HGNC Symbol Acc HGNC 11049
F03	UPFH0112202	ENST000000371070.8	SLIT1	ENSG00000187122	slit guidance ligand 1 Source HGNC Symbol Acc HGNC 11085
F04	UPFH0584453	ENST000000394991.7	SNCA	ENSG00000145335	synuclein alpha Source HGNC Symbol Acc HGNC 11138
F05	UPFH0197733	ENST000000438066.1	SPEN	ENSG00000065526	spen family transcriptional repressor Source HGNC Symbol Acc HGNC 17575
F06	UPFH0336134	ENST000000446327.6	SRSF7	ENSG00000115875	serine and arginine rich splicing factor 7 Source HGNC Symbol Acc HGNC 10789
F07	UPFH0301193	ENST000000566408.5	STUB1	ENSG00000103266	STIP1 homology and U-box containing protein 1 Source HGNC Symbol Acc HGNC 11427
F08	UPFH0176060	ENST000000557410.5	SV2B	ENSG00000185518	synaptic vesicle glycoprotein 2B Source HGNC Symbol Acc HGNC 16874
F09	UPFH0144507	ENST000000618464.1	SYNGR3	ENSG00000127561	synaptogyrin 3 Source HGNC Symbol Acc HGNC 11501
F10	UPFH0588704	ENST000000547046.5	SYT1	ENSG00000067715	synaptotagmin 1 Source HGNC Symbol Acc HGNC 11509

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH0263691	ENST00000368324.5	SYT11	ENSG00000132718	synaptotagmin 11 Source HGNC Symbol Acc HGNC 19239
F12	UPFH0509582	ENST00000636585.1	TCF7L2	ENSG00000148737	transcription factor 7 like 2 Source HGNC Symbol Acc HGNC 11641
G01	UPFH0521066	ENST00000412076.1	TH	ENSG00000180176	tyrosine hydroxylase Source HGNC Symbol Acc HGNC 11782
G02	UPFH0347856	ENST00000543496.3	TPBG	ENSG00000146242	trophoblast glycoprotein Source HGNC Symbol Acc HGNC 12004
G03	UPFH0334418	ENST00000451702.2	UBA1	ENSG00000130985	ubiquitin like modifier activating enzyme 1 Source HGNC Symbol Acc HGNC 12469
G04	UPFH0050019	ENST00000577958.1	UBB	ENSG00000170315	ubiquitin B Source HGNC Symbol Acc HGNC 12463
G05	UPFH0076606	ENST00000402301.5	UBE2I	ENSG00000103275	ubiquitin conjugating enzyme E2 I Source HGNC Symbol Acc HGNC 12485
G06	UPFH0298785	ENST00000503368.5	UBE2K	ENSG00000078140	ubiquitin conjugating enzyme E2 K Source HGNC Symbol Acc HGNC 4914
G07	UPFH0079382	ENST00000458578.6	UBE2L3	ENSG00000185651	ubiquitin conjugating enzyme E2 L3 Source HGNC Symbol Acc HGNC 12488
G08	UPFH0452704	ENST00000472501.5	UCHL1	ENSG00000154277	ubiquitin C-terminal hydrolase L1 Source HGNC Symbol Acc HGNC 12513
G09	UPFH0201900	ENST00000472689.5	USP34	ENSG00000115464	ubiquitin specific peptidase 34 Source HGNC Symbol Acc HGNC 20066
G10	UPFH0000812	ENST00000396308.3	VAMP1	ENSG00000139190	vesicle associated membrane protein 1 Source HGNC Symbol Acc HGNC 12642
G11	UPFH0042186	ENST00000022615.9	VDAC3	ENSG00000078668	voltage dependent anion channel 3 Source HGNC Symbol Acc HGNC 12674
G12	UPFH0518715	ENST00000522819.5	YWHAZ	ENSG00000164924	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein zeta Source HGNC Symbol Acc HGNC 12855
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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