

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

Rat Drug Metabolism: Phase I Enzymes

Cat. no. 249950 SBRN-068ZA

For study focus gene expression analysis

Shipping and storage

QuantiNova LNA PCR Focus Panels are shipped at ambient temperature. Immediately upon receipt, they should be stored 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 PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova SYBR® Green PCR Kit (Mastermix) for PCR.

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

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. Refer to the QuantiNova LNA PCR System Handbook at www.qiagen.com for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
A	Aadac	Adh6a	Adh4	Adh1	Adh7	Aldh1a1	Aldh1a2	Aldh1a3	Aldh1b1	Aldh2	Aldh3a1	Aldh3a2
B	Aldh3b1	Adhfe1	Aldh5a1	Aldh6a1	Aldh7a1	Aldh8a1	Aldh9a1	Cel	Cyp11a1	Cyp2b12	Cyp17a1	Cyp19a1
C	Cyp1a1	Cyp1a2	Cyp1b1	Cyp24a1	Cyp26a1	Cyp26b1	Cyp26c1	Cyp27a1	Cyp27b1	Cyp2a1	Cyp2b2	Cyp2b3
D	Cyp2c11	Cyp2c22	Cyp2c23	Cyp2b1	Cyp2c6v1	Cyp2c7	Cyp2c13	Cyp2d2	Cyp2d4	Cyp2e1	Cyp2f4	Cyp2r1
E	Cyp2s1	Cyp2t1	Cyp2w1	Cyp3a18	Cyp2d1	Cyp3a9	Cyp4a3	Cyp4a8	Cyp4b1	Cyp4f1	Cyp4f18	Cyp4f4
F	Cyp4f40	Cyp4f6	Cyp7a1	Cyp7b1	Cyp8b1	Dhrs2	Dpyd	Esd	Fmo1	Fmo2	Fmo3	Fmo4
G	Fmo5	Gzma	Gzmb	Hsd17b10	Maaa	Maob	Ptgs1	Ptgs2	Iffo2	Uchl1	Uchl3	Xdh
H	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	QIC	QIC	QIC	PPC	PPC	PPC

Gene table: QuantiNova LNA PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	SBR1215348	ENSRNOT00000018761.4	Aadac	ENSRNOG0000013950	arylacetamide deacetylase Source RGD Symbol Acc 631440
A02	SBR1189432	ENSRNOT00000016556.6	Adh6a	ENSRNOG0000012281	alcohol dehydrogenase 6A (class V) Source RGD Symbol Acc 1310029
A03	SBR1097286	ENSRNOT00000090253.1	Adh4	ENSRNOG0000046357	alcohol dehydrogenase 4 (class II), pi polypeptide Source RGD Symbol Acc 71028
A04	SBR1143351	ENSRNOT00000036993.4	Adh1	ENSRNOG0000012436	alcohol dehydrogenase 6 (class V) Source RGD Symbol Acc 1306313
A05	SBR1150658	ENSRNOT00000015870.4	Adh7	ENSRNOG0000032959	alcohol dehydrogenase 7 (class IV), mu or sigma polypeptide Source RGD Symbol Acc 621638
A06	SBR1184560	ENSRNOT00000024000.6	Aldh1a1	ENSRNOG0000017619	aldehyde dehydrogenase 1 family, member A1 Source RGD Symbol Acc 2087
A07	SBR1124091	ENSRNOT00000079115.1	Aldh1a2	ENSRNOG0000055049	aldehyde dehydrogenase 1 family, member A2 Source RGD Symbol Acc 620250
A08	SBR1132733	ENSRNOT00000085158.1	Aldh1a3	ENSRNOG0000052070	aldehyde dehydrogenase 1 family, member A3 Source RGD Symbol Acc 628662
A09	SBR1104100	ENSRNOT00000015281.4	Aldh1b1	ENSRNOG0000011497	aldehyde dehydrogenase 1 family, member B1 Source RGD Symbol Acc 1306737
A10	SBR1166914	ENSRNOT00000001816.6	Aldh2	ENSRNOG0000001344	aldehyde dehydrogenase 2 family (mitochondrial) Source RGD Symbol Acc 69219
A11	SBR1162955	ENSRNOT00000003182.5	Aldh3a1	ENSRNOG0000002331	aldehyde dehydrogenase 3 family, member A1 Source RGD Symbol Acc 2088
A12	SBR1209238	ENSRNOT00000066109.3	Aldh3a2	ENSRNOG0000002342	aldehyde dehydrogenase 3 family, member A2 Source RGD Symbol Acc 61866
B01	SBR1142353	ENSRNOT00000085312.1	Aldh3b1	ENSRNOG0000017512	aldehyde dehydrogenase 3 family, member B1 Source RGD Symbol Acc 1359546
B02	SBR1209951	ENSRNOT00000009462.6	Adhfe1	ENSRNOG0000007069	alcohol dehydrogenase, iron containing, 1 Source RGD Symbol Acc 1308863
B03	SBR1126366	ENSRNOT00000031384.5	Aldh5a1	ENSRNOG0000023538	aldehyde dehydrogenase 5 family, member A1 Source RGD Symbol Acc 621422
B04	SBR1195235	ENSRNOT00000015545.4	Aldh6a1	ENSRNOG0000011419	aldehyde dehydrogenase 6 family, member A1 Source RGD Symbol Acc 621556
B05	SBR1193698	ENSRNOT00000020325.7	Aldh7a1	ENSRNOG0000014645	aldehyde dehydrogenase 7 family, member A1 Source RGD Symbol Acc 1308614
B06	SBR1123900	ENSRNOT00000020015.5	Aldh8a1	ENSRNOG0000014907	aldehyde dehydrogenase 8 family, member A1 Source RGD Symbol Acc 1590218
B07	SBR1120705	ENSRNOT00000005611.5	Aldh9a1	ENSRNOG0000004027	aldehyde dehydrogenase 9 family, member A1 Source RGD Symbol Acc 68409
B08	SBR1133308	ENSRNOT00000014572.4	Cel	ENSRNOG0000010406	carboxyl ester lipase Source RGD Symbol Acc 2331
B09	SBR1181695	ENSRNOT00000010831.6	Cyp11a1	ENSRNOG0000008074	cytochrome P450, family 11, subfamily a, polypeptide 1 Source RGD Symbol Acc 69325
B10	SBR1187655	ENSRNOT00000084936.1	Cyp2b12	ENSRNOG0000031529	cytochrome P450, family 2, subfamily b, polypeptide 12 Source RGD Symbol Acc 620088
B11	SBR1128529	ENSRNOT00000027160.4	Cyp17a1	ENSRNOG0000020035	cytochrome P450, family 17, subfamily a, polypeptide 1 Source RGD Symbol Acc 2456
B12	SBR1101306	ENSRNOT00000000212.7	Cyp19a1	ENSRNOG0000000196	cytochrome P450, family 19, subfamily a, polypeptide 1 Source RGD Symbol Acc 2457
C01	SBR1197501	ENSRNOT00000026473.4	Cyp1a1	ENSRNOG0000019500	cytochrome P450, family 1, subfamily a, polypeptide 1 Source RGD Symbol Acc 2458
C02	SBR1120481	ENSRNOT00000021653.7	Cyp1a2	ENSRNOG0000016173	cytochrome P450, family 1, subfamily a, polypeptide 2 Source RGD Symbol Acc 2459
C03	SBR1097149	ENSRNOT00000082017.1	Cyp1b1	ENSRNOG0000040287	cytochrome P450, family 1, subfamily b, polypeptide 1 Source RGD Symbol Acc 2460
C04	SBR1198822	ENSRNOT00000046011.2	Cyp24a1	ENSRNOG0000013062	cytochrome P450, family 24, subfamily a, polypeptide 1 Source RGD Symbol Acc 2462
C05	SBR1150528	ENSRNOT00000022549.4	Cyp26a1	ENSRNOG0000016750	cytochrome P450, family 26, subfamily a, polypeptide 1 Source RGD Symbol Acc 620161
C06	SBR1146084	ENSRNOT00000020505.3	Cyp26b1	ENSRNOG0000015076	cytochrome P450, family 26, subfamily b, polypeptide 1 Source RGD Symbol Acc 631379
C07	SBR1115088	ENSRNOT00000030962.3	Cyp26c1	ENSRNOG0000030698	cytochrome P450, family 26, subfamily C, polypeptide 1 Source RGD Symbol Acc 1308843
C08	SBR1112320	ENSRNOT00000023152.5	Cyp27a1	ENSRNOG0000017188	cytochrome P450, family 27, subfamily a, polypeptide 1 Source RGD Symbol Acc 727915
C09	SBR1167575	ENSRNOT00000084933.1	Cyp27b1	ENSRNOG0000046214	cytochrome P450, family 27, subfamily b, polypeptide 1 Source RGD Symbol Acc 69192
C10	SBR1206935	ENSRNOT00000028237.4	Cyp2a1	ENSRNOG0000020817	cytochrome P450, family 2, subfamily a, polypeptide 3 Source RGD Symbol Acc 2465
		ENSRNOT000000		ENSRNOG00	cytochrome P450, family 2, subfamily b, polypeptide 2 Source RGD Symbol Acc

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBR1135363	028196.6	Cyp2b2	000020775	2467
C12	SBR1180676	ENSRNOT00000 034845.5	Cyp2b3	ENSRNOG00 000033164	cytochrome P450, family 2, subfamily b, polypeptide 3 Source RGD Symbol Acc 628627
D01	SBR1096093	ENSRNOT00000 088853.1	Cyp2c11	ENSRNOG00 000052810	cytochrome P450, subfamily 2, polypeptide 11 Source RGD Symbol Acc 2469
D02	SBR1194061	ENSRNOT00000 054724.2	Cyp2c22	ENSRNOG00 000021924	cytochrome P450, family 2, subfamily c, polypeptide 22 Source RGD Symbol Acc 620368
D03	SBR1114067	ENSRNOT00000 017840.4	Cyp2c23	ENSRNOG00 000013291	cytochrome P450, family 2, subfamily c, polypeptide 23 Source RGD Symbol Acc 620370
D04	SBR1209129	ENSRNOT00000 091923.1	Cyp2b1	ENSRNOG00 000033680	cytochrome P450, family 2, subfamily b, polypeptide 1 Source RGD Symbol Acc 2466
D05	SBR1094603	ENSRNOT00000 092985.1	Cyp2c6v1	ENSRNOG00 000024016	cytochrome P450, family 2, subfamily C, polypeptide 6, variant 1 Source RGD Symbol Acc 619934
D06	SBR1213983	ENSRNOT00000 040325.5	Cyp2c7	ENSRNOG00 000021405	cytochrome P450, family 2, subfamily c, polypeptide 7 Source RGD Symbol Acc 620379
D07	SBR1149228	ENSRNOT00000 071633.3	Cyp2c13	ENSRNOG00 000049464	cytochrome P450, family 2, subfamily c, polypeptide 13 Source RGD Symbol Acc 620363
D08	SBR1192231	ENSRNOT00000 012413.4	Cyp2d2	ENSRNOG00 000008988	cytochrome P450, family 2, subfamily d, polypeptide 2 Source RGD Symbol Acc 2471
D09	SBR1150695	ENSRNOT00000 011880.6	Cyp2d4	ENSRNOG00 000032261	cytochrome P450, family 2, subfamily d, polypeptide 4 Source RGD Symbol Acc 620640
D10	SBR1157610	ENSRNOT00000 078080.1	Cyp2e1	ENSRNOG00 000012458	cytochrome P450, family 2, subfamily e, polypeptide 1 Source RGD Symbol Acc 2475
D11	SBR1182366	ENSRNOT00000 068690.3	Cyp2f4	ENSRNOG00 000032805	cytochrome P450, family 2, subfamily f, polypeptide 4 Source RGD Symbol Acc 2476
D12	SBR1146901	ENSRNOT00000 067609.3	Cyp2r1	ENSRNOG00 000011367	cytochrome P450, family 2, subfamily r, polypeptide 1 Source RGD Symbol Acc 1311866
E01	SBR1190827	ENSRNOT00000 028177.4	Cyp2s1	ENSRNOG00 000020743	cytochrome P450, family 2, subfamily s, polypeptide 1 Source RGD Symbol Acc 1306078
E02	SBR1190298	ENSRNOT00000 068322.1	Cyp2f1	ENSRNOG00 000028891	cytochrome P450, family 2, subfamily f, polypeptide 1 Source RGD Symbol Acc 620086
E03	SBR1157005	ENSRNOT00000 091003.1	Cyp2w1	ENSRNOG00 000051770	cytochrome P450, family 2, subfamily w, polypeptide 1 Source RGD Symbol Acc 1305193
E04	SBR1122407	ENSRNOT00000 075671.3	Cyp3a18	ENSRNOG00 000000969	cytochrome P450, family 3, subfamily a, polypeptide 18 Source RGD Symbol Acc 628709
E05	SBR1149730	ENSRNOT00000 044470.5	Cyp2d1	ENSRNOG00 000029179	cytochrome P450, family 2, subfamily d, polypeptide 1 Source RGD Symbol Acc 708427
E06	SBR1113560	ENSRNOT00000 073099.2	Cyp3a9	ENSRNOG00 000046643	cytochrome P450, family 3, subfamily a, polypeptide 9 Source RGD Symbol Acc 708392
E07	SBR1216017	ENSRNOT00000 045571.5	Cyp4a3	ENSRNOG00 000009741	cytochrome P450, family 4, subfamily a, polypeptide 3 Source RGD Symbol Acc 631356
E08	SBR1207302	ENSRNOT00000 012448.5	Cyp4a8	ENSRNOG00 000008842	cytochrome P450, family 4, subfamily a, polypeptide 8 Source RGD Symbol Acc 628846
E09	SBR1186277	ENSRNOT00000 013321.6	Cyp4b1	ENSRNOG00 000055078	cytochrome P450, family 4, subfamily b, polypeptide 1 Source RGD Symbol Acc 2480
E10	SBR1097881	ENSRNOT00000 006533.5	Cyp4f1	ENSRNOG00 000004786	cytochrome P450, family 4, subfamily f, polypeptide 1 Source RGD Symbol Acc 70926
E11	SBR1121547	ENSRNOT00000 085328.1	Cyp4f18	ENSRNOG00 000015751	cytochrome P450, family 4, subfamily f, polypeptide 18 Source RGD Symbol Acc 1305261
E12	SBR1138268	ENSRNOT00000 041034.4	Cyp4f4	ENSRNOG00 000032895	cytochrome P450, family 4, subfamily f, polypeptide 4 Source RGD Symbol Acc 708363
F01	SBR1151818	ENSRNOT00000 066654.1	Cyp4f40	ENSRNOG00 000043344	cytochrome P450, family 4, subfamily f, polypeptide 40 Source RGD Symbol Acc 1559596
F02	SBR1118558	ENSRNOT00000 066095.3	Cyp4f6	ENSRNOG00 000043233	cytochrome P450, family 4, subfamily f, polypeptide 6 Source RGD Symbol Acc 708365
F03	SBR1177796	ENSRNOT00000 012819.4	Cyp7a1	ENSRNOG00 000009488	cytochrome P450 family 7 subfamily A member 1 Source RGD Symbol Acc 2482
F04	SBR1188185	ENSRNOT00000 013116.6	Cyp7b1	ENSRNOG00 000009730	cytochrome P450 family 7 subfamily B member 1 Source RGD Symbol Acc 2483
F05	SBR1141498	ENSRNOT00000 026355.5	Cyp8b1	ENSRNOG00 000019481	cytochrome P450 family 8 subfamily B member 1 Source RGD Symbol Acc 71016
F06	SBR1160545	ENSRNOT00000 024483.4	Dhrs2	ENSRNOG00 000018177	dehydrogenase/reductase 2 Source RGD Symbol Acc 1583909
F07	SBR1197054	ENSRNOT00000 055723.4	Dpyd	ENSRNOG00 000017105	dihydropyrimidine dehydrogenase Source RGD Symbol Acc 621218
F08	SBR1180086	ENSRNOT00000 078013.1	Esd	ENSRNOG00 000009512	esterase D Source RGD Symbol Acc 1592114
F09	SBR1110436	ENSRNOT00000 041908.3	Fmo1	ENSRNOG00 000034191	flavin containing monooxygenase 1 Source RGD Symbol Acc 2622
F10	SBR1128970	ENSRNOT00000 004762.5	Fmo2	ENSRNOG00 000003510	flavin containing monooxygenase 2 Source RGD Symbol Acc 628600

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBR1206583	ENSRNOT00000004864.5	Fmo3	ENSRNOG0000003620	flavin containing monooxygenase 3 Source RGD Symbol Acc 619761
F12	SBR1128603	ENSRNOT00000004599.5	Fmo4	ENSRNOG0000003400	flavin containing monooxygenase 4 Source RGD Symbol Acc 628601
G01	SBR1179307	ENSRNOT00000024423.5	Fmo5	ENSRNOG0000018076	flavin containing monooxygenase 5 Source RGD Symbol Acc 628602
G02	SBR1165549	ENSRNOT00000014134.3	Gzma	ENSRNOG0000010603	granzyme A Source RGD Symbol Acc 628640
G03	SBR1201047	ENSRNOT00000041430.5	Gzmb	ENSRNOG0000049976	Granzyme B-like 2 Source RGD Symbol Acc 2320097
G04	SBR1099274	ENSRNOT00000043559.4	Hsd17b10	ENSRNOG0000003049	hydroxysteroid (17-beta) dehydrogenase 10 Source RGD Symbol Acc 69231
G05	SBR1169430	ENSRNOT00000066674.2	Maoa	ENSRNOG0000002848	monoamine oxidase A Source RGD Symbol Acc 61898
G06	SBR1159358	ENSRNOT00000044009.5	Maob	ENSRNOG0000029778	monoamine oxidase B Source RGD Symbol Acc 3041
G07	SBR1187694	ENSRNOT00000010218.5	Ptgs1	ENSRNOG0000007415	prostaglandin-endoperoxide synthase 1 Source RGD Symbol Acc 3439
G08	SBR1122148	ENSRNOT00000003567.4	Ptgs2	ENSRNOG000002525	prostaglandin-endoperoxide synthase 2 Source RGD Symbol Acc 620349
G09	SBR1173255	ENSRNOT00000080108.1	Iffo2	ENSRNOG0000061876	aldehyde dehydrogenase 4 family, member A1 Source RGD Symbol Acc 1624206
G10	SBR1133680	ENSRNOT00000003248.5	Uchl1	ENSRNOG0000002343	ubiquitin C-terminal hydrolase L1 Source RGD Symbol Acc 3928
G11	SBR1136611	ENSRNOT00000012842.6	Uchl3	ENSRNOG0000009530	ubiquitin C-terminal hydrolase L3 Source RGD Symbol Acc 1561196
G12	SBR1150107	ENSRNOT00000009634.6	Xdh	ENSRNOG0000007081	xanthine dehydrogenase Source RGD Symbol Acc 62043
H01	SBR1220567	ENSRNOT00000042459.4	Actb	ENSRNOG0000034254	actin, beta Source RGD Symbol Acc 628837
H02	SBR1220568	ENSRNOT00000023017.5	B2m	ENSRNOG0000017123	beta-2 microglobulin Source RGD Symbol Acc 2189
H03	SBR1225377	ENSRNOT00000065935.3	Hprt1	ENSRNOG0000048561	hypoxanthine phosphoribosyltransferase 1 Source RGD Symbol Acc 2826
H04	SBR1122313	ENSRNOT00000017468.2	Ldha	ENSRNOG0000013009	lactate dehydrogenase A Source RGD Symbol Acc 2996
H05	SBR1220572	ENSRNOT00000018820.5	Rplp1	ENSRNOG0000013874	ribosomal protein lateral stalk subunit P1 Source RGD Symbol Acc 621774
H06	SBR1218555	Sybr_RGDC	RGDC	Sybr_RGDC	Rat Genomic DNA Contamination
H07	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H08	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H09	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H10	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control
H11	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control
H12	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control



Related products

Product	Contents	Cat. no.
QuantiNova LNA PCR QC Panel	These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats	249940
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 SYBR Green RT-PCR Kit (100)*	For 100 x 20 μ l reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 μ l QuantiNova SYBR Green 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	208152
QuantiNova SYBR Green PCR Kit (100)*	For 100 x 20 μ l reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 μ l QuantiNova Yellow Template Dilution Buffer, 250 μ l QN ROX Reference Dye, 1.9 ml Water	208052

*Larger kit sizes available.

The QuantiNova LNA 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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