applied biosystems™

TaqMan® Array Plates

TaqMan® Gene Expression Assays Delivered in Ready-to-Use, 96-well Custom Array Plates, or Predefined Gene Signature Plates

- Flexible—choose from customizable TaqMan® Array Plates or preconfigured Gene Signature Plates in Fast or standard formats

- Affordable—minimum order of six Custom Array Plates or one Gene Signature Plate; ideal for small, medium, or large projects

- Customizable—online Custom TaqMan® Array Plate configuration tool lets you choose plate configuration, assays, placement, replicates, and controls

- Fast delivery—on your bench in days

- Convenient—dried TaqMan® probe and PCR primer sets supplied in a 96-well plate; just add master mix and your cDNA sample

- Easy data analysis—DataAssist™ Software helps provide rapid data interpretation

TaqMan® Array Plates are delivered with your specified choice and format of preloaded TaqMan® Gene Expression Assays, available in both Fast and standard PCR formats.

Same TaqMan® Assay Quality, New Format

TaqMan® Array Plates contain high-quality TaqMan® Gene Expression Assays (TaqMan® probe and PCR primer sets) in a new convenient, dried-down, 96-well format. Extensive tests have found no difference in performance between TaqMan® Assays supplied in single-tube format and assays dried-down in a TaqMan® Array Plate. Figure 1 shows the results of an experiment comparing the linear range of the two formats, where no difference in performance was observed.

Ideal for projects such as validation of microarray and RNAi data, and pathway studies, TaqMan® Array Plates include enough TaqMan® Assay reagent in each well for one 20 µL reaction (standard plate) or 10 µL reaction (Fast plate). As few as one Gene Signature Plate or six Custom Array Plates can be ordered, making these an affordable option for many laboratories and minimizing the waste of unused single-tube TaqMan® Assays. Save a significant amount of time setting up your experiments—just add master mix and cDNA sample, and begin cycling. The standard plate format provides real-time PCR results in 1.5 hr, while the Fast plate format delivers results in only 30–45 min.

Select Your Perfect Plate

Choose from an expansive and increasing collection of TaqMan® Array

Gene Signature Plates. Gene Signature Plates are preconfigured with the most appropriate gene assays that represent a specific biological process, pathway, biomarker set, or disease state (Figure 2). Additionally, TaqMan® Array Endogenous Control Plates, containing 32 endogenous control genes in triplicate, are ideal for determining the best experimental control for your study.

Each plate is delivered with the predefined assays and endogenous controls dried down in the plate's wells, ready for accurate assessment of an entire gene signature in one simple experiment.

If a predefined gene set is not available from the current Gene Signature Plate collection, a Custom Array Plate can be configured using any of over 50,000

TaqMan® Gene Expression Assays for species including human, mouse, rat, canine, rhesus macaque, and all other organisms for which Applied Biosystems has pre-designed assays available. You can design a Custom TaqMan® Array Plate online with the assays you want, in the arrangement you need. (Note that an assay for 18S ribosomal RNA is added to each plate
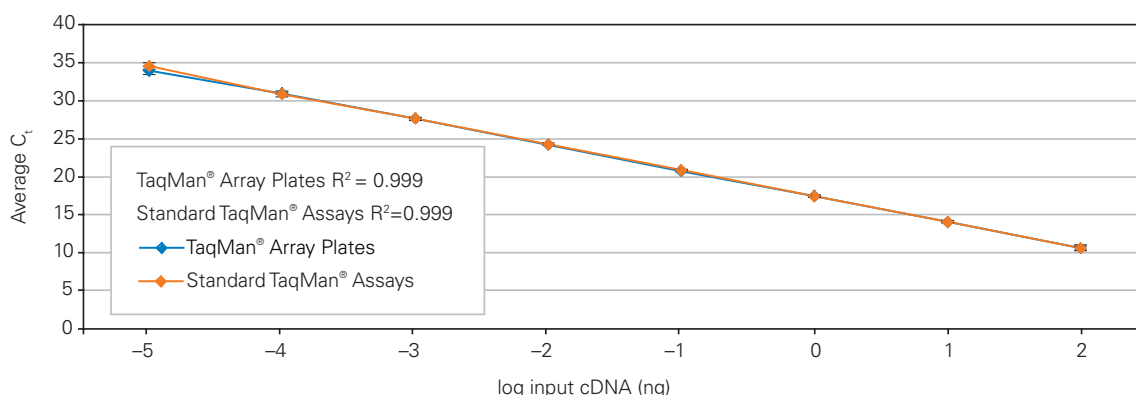

Figure 1. Linear Dynamic Range of TaqMan® Array Plates (Standard) vs. TaqMan® Assays. TaqMan® Array Plates have the same performance as standard TaqMan® Assays (wet) on a 96-well plate. The linear dynamic range is maintained, even down to low cDNA inputs, showing the assays are unaffected by the drying down of the TaqMan® Array Plate. Each plate contained one assay (18S Hs99999901_s1) and eight replicates for each cDNA input.
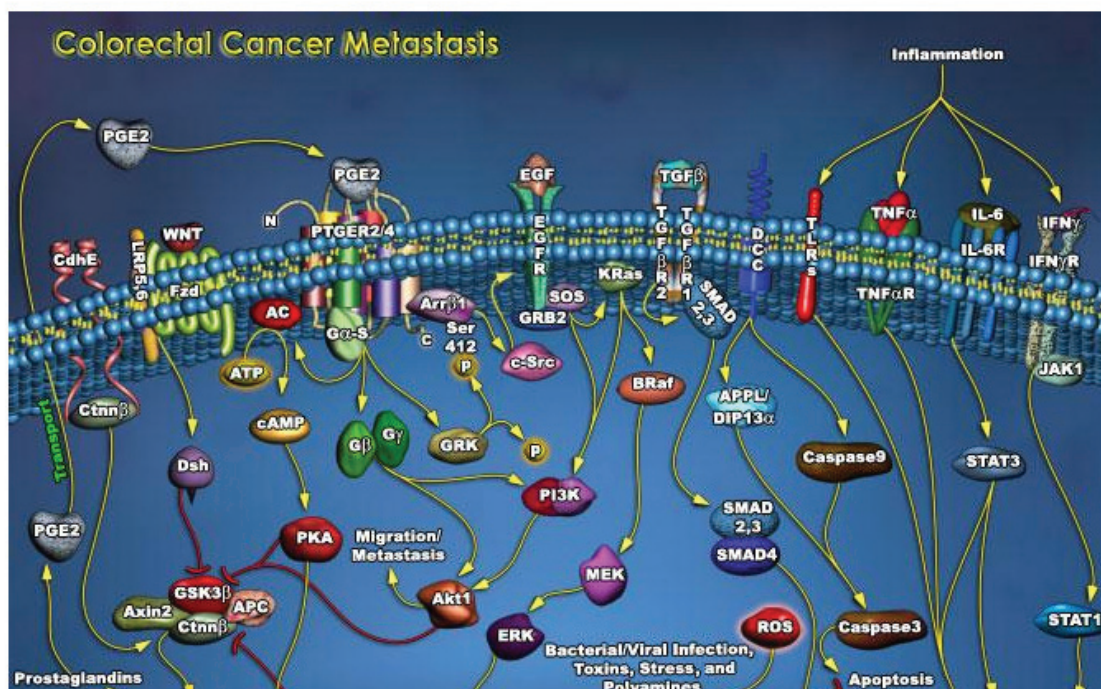

Figure 2. Choose From an Expanding Collection of TaqMan® Array Gene Signature Plates Specific to Research Pathways Such As Colorectal Cancer Metastasis.

Format 96 + Candidate Endogenous Control Genes

	1	2	3	4	5	6	7	8	9	10	11	12
A	MC	CEC1	CEC2	CEC3	1	2	3	4	5	6	7	8
B	9	10	11	12	13	14	15	16	17	18	19	20
C	21	22	23	24	25	26	27	28	29	30	31	32
D	33	34	35	36	37	38	39	40	41	42	43	44
E	45	46	47	48	49	50	51	52	53	54	55	56
F	57	58	59	60	61	62	63	64	65	66	67	68
G	69	70	71	72	73	74	75	76	77	78	79	80
H	81	82	83	84	85	86	87	88	89	90	91	92

MC = Manufacturing Control (18S) CEC = Candidate Endogenous Control Genes (GAPDH, HPRT, GUSB)

Format 96

	1	2	3	4	5	6	7	8	9	10	11	12
A	MC	1	2	3	4	5	6	7	8	9	10	11
B	12	13	14	15	16	17	18	19	20	21	22	23
C	24	25	26	27	28	29	30	31	32	33	34	35
D	36	37	38	39	40	41	42	43	44	45	46	47
E	48	49	50	51	52	53	54	55	56	57	58	59
F	60	61	62	63	64	65	66	67	68	69	70	71
G	72	73	74	75	76	77	78	79	80	81	82	83
H	84	85	86	87	88	89	90	91	92	93	94	95

MC = Manufacturing Control (18S)

Format 48 + Candidate Endogenous Control Genes

	1	2	3	4	5	6	7	8	9	10	11	12
A	MC	CEC1	CEC2	CEC3	1	2	MC	CEC1	CEC2	CEC3	1	2
B	3	4	5	6	7	8	3	4	5	6	7	8
C	9	10	11	12	13	14	9	10	11	12	13	14
D	15	16	17	18	19	20	15	16	17	18	19	20
E	21	22	23	24	25	26	21	22	23	24	25	26
F	27	28	29	30	31	32	27	28	29	30	31	32
G	33	34	35	36	37	38	33	34	35	36	37	38
H	39	40	41	42	43	44	39	40	41	42	43	44

MC = Manufacturing Control (18S) CEC = Candidate Endogenous Control Genes (GAPDH, HPRT, GUSB)

Format 48

	1	2	3	4	5	6	7	8	9	10	11	12
A	MC	1	2	3	4	5	MC	1	2	3	4	5
B	6	7	8	9	10	11	6	7	8	9	10	11
C	12	13	14	15	16	17	12	13	14	15	16	17
D	18	19	20	21	22	23	18	19	20	21	22	23
E	24	25	26	27	28	29	24	25	26	27	28	29
F	30	31	32	33	34	35	30	31	32	33	34	35
G	36	37	38	39	40	41	36	37	38	39	40	41
H	42	43	44	45	46	47	42	43	44	45	46	47

MC = Manufacturing Control (18S)

Format 32 + Candidate Endogenous Control Genes

	1	2	3	4	5	6	7	8	9	10	11	12
A	MC	CEC1	CEC2	CEC3	MC	CEC1	CEC2	CEC3	MC	CEC1	CEC2	CEC3
B	1	2	3	4	1	2	3	4	1	2	3	4
C	5	6	7	8	5	6	7	8	5	6	7	8
D	9	10	11	12	9	10	11	12	9	10	11	12
E	13	14	15	16	13	14	15	16	13	14	15	16
F	17	18	19	20	17	18	19	20	17	18	19	20
G	21	22	23	24	21	22	23	24	21	22	23	24
H	25	26	27	28	25	26	27	28	25	26	27	28

MC = Manufacturing Control (18S) CEC = Candidate Endogenous Control Genes (GAPDH, HPRT, GUSB)

Format 32

	1	2	3	4	5	6	7	8	9	10	11	12
A	MC	1	2	3	MC	1	2	3	MC	1	2	3
B	4	5	6	7	4	5	6	7	4	5	6	7
C	8	9	10	11	8	9	10	11	8	9	10	11
D	12	13	14	15	12	13	14	15	12	13	14	15
E	16	17	18	19	16	17	18	19	16	17	18	19
F	20	21	22	23	20	21	22	23	20	21	22	23
G	24	25	26	27	24	25	26	27	24	25	26	27
H	28	29	30	31	28	29	30	31	28	29	30	31

MC = Manufacturing Control (18S)

Format 16 + Candidate Endogenous Control Genes

	1	2	3	4	5	6	7	8	9	10	11	12
A	MC	CEC1	MC	CEC1	MC	CEC1	MC	CEC1	MC	CEC1	MC	CEC1
B	CEC2	CEC3	CEC2	CEC3	CEC2	CEC3	CEC2	CEC3	CEC2	CEC3	CEC2	CEC3
C	1	2	1	2	1	2	1	2	1	2	1	2
D	3	4	3	4	3	4	3	4	3	4	3	4
E	5	6	5	6	5	6	5	6	5	6	5	6
F	7	8	7	8	7	8	7	8	7	8	7	8
G	9	10	9	10	9	10	9	10	9	10	9	10
H	11	12	11	12	11	12	11	12	11	12	11	12

MC = Manufacturing Control (18S) CEC = Candidate Endogenous Control Genes (GAPDH, HPRT, GUSB)

Format 16

	1	2	3	4	5	6	7	8	9	10	11	12
A	MC	1	MC	1	MC	1	MC	1	MC	1	MC	1
B	2	3	2	3	2	3	2	3	2	3	2	3
C	4	5	4	5	4	5	4	5	4	5	4	5
D	6	7	6	7	6	7	6	7	6	7	6	7
E	8	9	8	9	8	9	8	9	8	9	8	9
F	10	11	10	11	10	11	10	11	10	11	10	11
G	12	13	12	13	12	13	12	13	12	13	12	13
H	14	15	14	15	14	15	14	15	14	15	14	15

MC = Manufacturing Control (18S)

Format 8

	1	2	3	4	5	6	7	8	9	10	11	12
A	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC
B	1	1	1	1	1	1	1	1	1	1	1	1
C	2	2	2	2	2	2	2	2	2	2	2	2
D	3	3	3	3	3	3	3	3	3	3	3	3
E	4	4	4	4	4	4	4	4	4	4	4	4
F	5	5	5	5	5	5	5	5	5	5	5	5
G	6	6	6	6	6	6	6	6	6	6	6	6
H	7	7	7	7	7	7	7	7	7	7	7	7

MC = Manufacturing Control (18S)

Figure 3. Available Custom TaqMan® Array Plate Formats. Five formats are available—choose 96 unique assays, 48 assays in duplicate, 32 in triplicate, 16 x 6, or 8 x 12. Candidate endogenous control genes can be included for Custom TaqMan® Array Plates containing human, mouse, or rat genes on all but the 8 x 12 format. Custom TaqMan® Array Plates are available in standard or Fast PCR formats.

as a manufacturing control, although in many cases it can also be used as an endogenous control for your experiment.)

Five Custom TaqMan® Array Plate formats are available—choose single assays, or assays in duplicate or triplicate (Figure 3). For human, mouse, or rat research, each format comes with an option of including three candidate endogenous control genes: GAPDH, HPRT, and GUSB. These assays were selected

based on in-house research indicating that these genes are evenly expressed throughout numerous tissues. It is, however, recommended that you validate the chosen control assay within your experimental system. For any of the additional 12 species we currently have inventoried assays for, or mixed-species plates, only the 18S control is included.

Ordering a Custom TaqMan® Array Plate Is Easy

1. Visit **www.appliedbiosystems. com/arrayplates**.

2. Select the format. Choose the best plate format for your experiments (Figure 4, panel A).

3. Choose assays and controls. Find TaqMan® Assays (Figure 4, panels B and C) by:

A. Select the format.

B. Search results.

C. Choose TaqMan® Assay(s).

D. Customize layout.

E. Review and order.
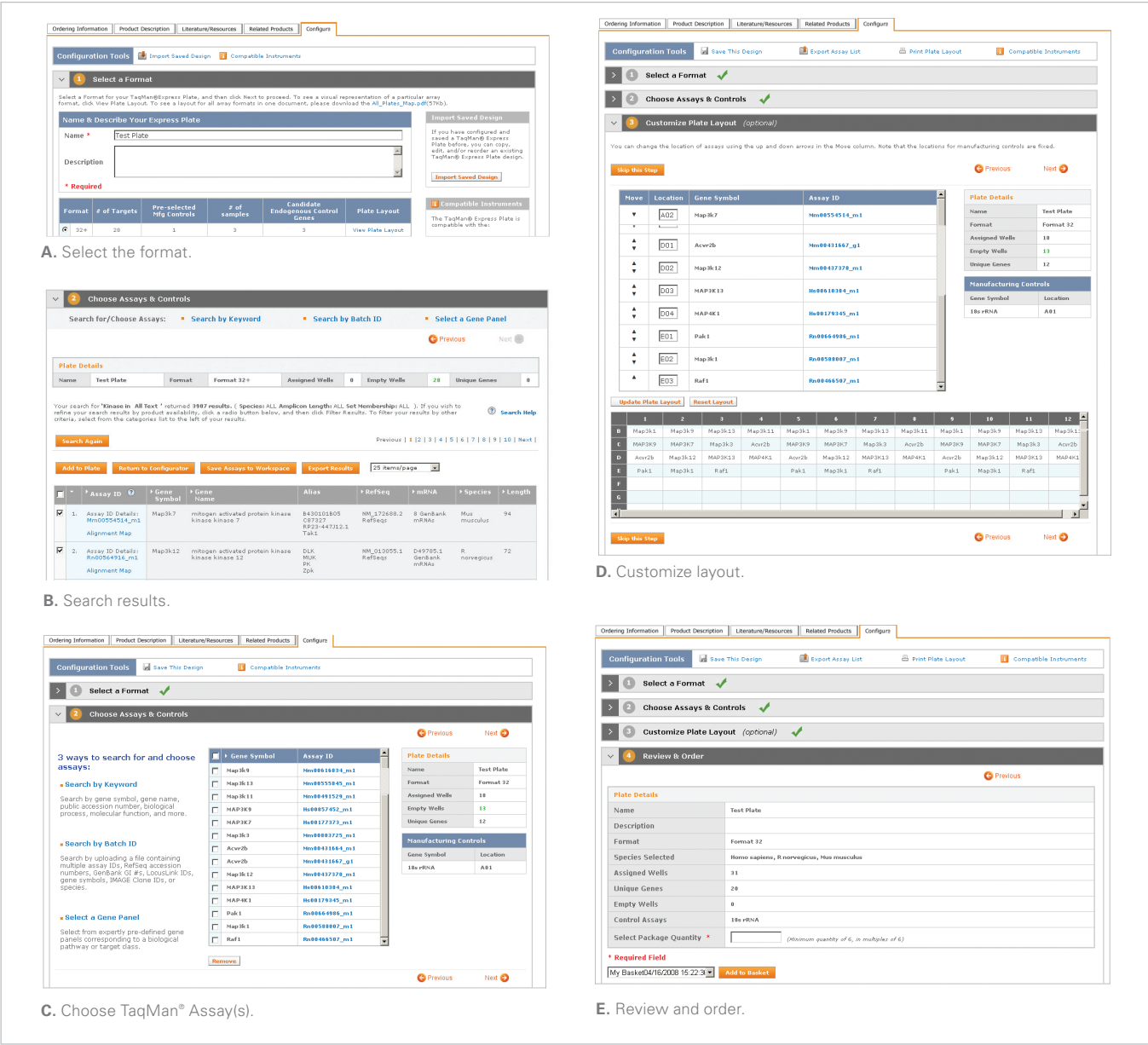
Figure 4. Online Ordering Process for Custom TaqMan® Array Plates.

- Searching for keywords
- Batch ID imports—importation of assay ID numbers from another file
- Browsing predefined Gene Panels

Searches can be filtered by species and/or amplicon length. Search results include assay ID, gene symbol, gene name, alias, RefSeq number, mRNA number (if applicable), species, and length. The results can be:

- Saved for later
- Added to plate
- Exported as a text file

4. Customize plate layout. Adjust the positions of TaqMan® Assays in wells; more than one species can be included on the same plate, and wells can be left empty if desired (Figure 4, panel D).

5. Review and order (Figure 4, panel E), and your Custom TaqMan® Array Plates will arrive in less than two weeks.

Small Minimum Order
As few as six Custom TaqMan® Array Plates can be ordered at a time. There is no maximum order limit, and volume discounts are available for large orders. The minimum order for TaqMan® Array Gene Signature Plates is one.

Each pack of TaqMan® Array Plates comes with a CD containing the plate configuration map and details of each TaqMan® Assay. This information is imported into your real-time PCR instrument to enable proper labeling of experimental data and easy access to assay ID numbers for reference and reordering.

Simple to Use
Each TaqMan® Array Plate well contains a single TaqMan® Assay for one 20 μL reaction (standard) or one 10 μL reaction (Fast). The plates can be stored at room temperature or at 4°C. When you are ready to run your assays, simply add PCR master mix and your cDNA sample, seal the plate, and begin cycling on a real-time PCR instrument.

Compatibility
TaqMan® Array Standard Plates have been optimized for use with TaqMan® Gene Expression Master Mix, but can be used with TaqMan® Universal PCR Master Mix. TaqMan® Array Fast Plates have been optimized for use with TaqMan® Fast Universal PCR Master Mix, but can be used with TaqMan® Gene Expression Master Mix or TaqMan® Universal PCR Master Mix. TaqMan® Array Plates must be run on a real-time PCR instrument with 96-well plate capability. Standard plates have been validated for use on Applied Biosystems® 7000, 7300, 7500, and 7900HT Fast Real-Time PCR Systems using standard 96-well blocks and standard PCR cycling conditions, and 20 μL reaction volumes. Fast plates are validated for use on Applied Biosystems® StepOnePlus™, 7500 Fast, and 7900HT Fast Real-Time PCR Systems using Fast 96-well blocks, Fast PCR cycling conditions, and 10 μL reaction volumes.

Powerful Data Analysis
Our new DataAssist™ Software package enables rapid and comprehensive interpretation of TaqMan® Array Plate results. DataAssist™ Software contains a filtering procedure for outlier removal, various normalization methods based on single or multiple genes, and provides relative quantification (RQ) analysis of gene expression through a combination of statistical analysis and interactive visualization. DataAssist™ Software can be downloaded for free at **www .appliedbiosystems.com/dataassist**.

ORDERING INFORMATION

Description	Size	P/N
Custom TaqMan® Array Plates, Format 8 (Standard)		4413266
Custom TaqMan® Array Plates, Format 8 (Fast)		4413263
Custom TaqMan® Array Plates, Format 16 (Standard)		4413264
Custom TaqMan® Array Plates, Format 16 (Fast)		4413261
Custom TaqMan® Array Plates, Format 16 + Endogenous Controls (Standard)		4413265
Custom TaqMan® Array Plates, Format 16 + Endogenous Controls (Fast)		4413262
Custom TaqMan® Array Plates, Format 32 (Standard)		4391528
Custom TaqMan® Array Plates, Format 32 (Fast)		4413259
Custom TaqMan® Array Plates, Format 32 + Endogenous Controls (Standard)		4391529
Custom TaqMan® Array Plates, Format 32 + Endogenous Controls (Fast)		4413260
Custom TaqMan® Array Plates, Format 48 (Standard)		4391526
Custom TaqMan® Array Plates, Format 48 (Fast)		4413257
Custom TaqMan® Array Plates, Format 48 + Endogenous Controls (Standard)		4391527
Custom TaqMan® Array Plates, Format 48 + Endogenous Controls (Fast)		4413258
Custom TaqMan® Array Plates, Format 96 (Standard)		4391524
Custom TaqMan® Array Plates, Format 96 (Fast)		4413255
Custom TaqMan® Array Plates, Format 96 + Endogenous Controls (Standard)		4391525
Custom TaqMan® Array Plates, Format 96 + Endogenous Controls (Fast)		4413256
TaqMan® Array Gene Signature Plates (Standard and Fast)		Multiple*
TaqMan® Gene Expression Master Mix, 1 Mini-Pack (1 x 1 mL)	40 rxns	4370048
TaqMan® Gene Expression Master Mix, 1-Pack (1 x 5 mL)	200 rxns	4369016
TaqMan® Gene Expression Master Mix, 2-Pack (2 x 5 mL)	400 rxns	4369514
TaqMan® Gene Expression Master Mix, 5-Pack (5 x 5 mL)	1,000 rxns	4369510
TaqMan® Gene Expression Master Mix, 10-Pack (10 x 5 mL)	2,000 rxns	4369542
TaqMan® Gene Expression Master Mix, 1 Bulk Pack (1 x 50 mL)	2,000 rxns	4370074
TaqMan® Fast Universal PCR Master Mix, No AmpErase® UNG	250 rxns	4352042
TaqMan® Fast Universal PCR Master Mix, No AmpErase® UNG	500 rxns	4366072
TaqMan® Fast Universal PCR Master Mix, No AmpErase® UNG	1,250 rxns	4366073
TaqMan® Fast Universal PCR Master Mix, No AmpErase® UNG	2,500 rxns	4364103
TaqMan® Fast Universal PCR Master Mix, No AmpErase® UNG	5,000 rxns	4367846

* There are multiple part numbers for TaqMan® Array Gene Signature Plates. Find a complete list at **www.appliedbiosystems.com/signatureplates**.

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For our office locations please call the division headquarters or refer to our website at
www.appliedbiosystems.com/about/offices.cfm