

understanding your shipment TaqMan[®] Assays





As part of Applied Biosystems' commitment to providing the highest-quality service to our customers, this document is provided to help you better understand the items included with your shipment.

The following items are included in your shipment:

- Storage rack(s) with tube(s). Assays from different TaqMan[®] product lines will be grouped onto separate racks.
- Paper documents and compact disc(s)

Depending on the specific product(s) in your TaqMan[®] Assay shipment, the following documents may be included:

- Packing List
- Data Sheet
- Assay Information File(s)
- Protocol(s), User Guide(s), and Quick Reference Card(s)
- Product Insert(s)
- Certificate(s) of Analysis
- Safety Data Sheet(s)

Applied Biosystems is dedicated to your success and satisfaction. Building on our reputation for industry-leading quality, and acting with integrity and respect, we are committed to providing innovative products that exceed your expectations.

To provide this unique Applied Biosystems customer experience, we will endeavor to:

- Design products that enable you to consistently obtain accurate results
- Understand your applications and provide information and support for integrated workflows
- Offer timely and dependable delivery of orders
- Stand behind what we deliver



Packing List

The Packing List contains information specific to your shipment. An example is shown here.

Section	Description
1 Delivery Number	A unique number assigned by Applied Biosystems to each customer shipment
2 P.O.	Customer-provided Purchase Order (P.O.) Number
3 Date Shipped	The date the product is packaged for shipment (mm/dd/yyyy)
4 Order Number	A unique number assigned by Applied Biosystems to each customer Sales Order
5 Product Number	The number used for (re)ordering the product, sometimes referred to as the Part Number
6 Description	The name of the item ordered
7 Batch Number	Manufacturing tracking number assigned by Applied Biosystems
8 Quantity Shipped	The number of items in the shipment
9 Quantity Pending	The number of items still in production

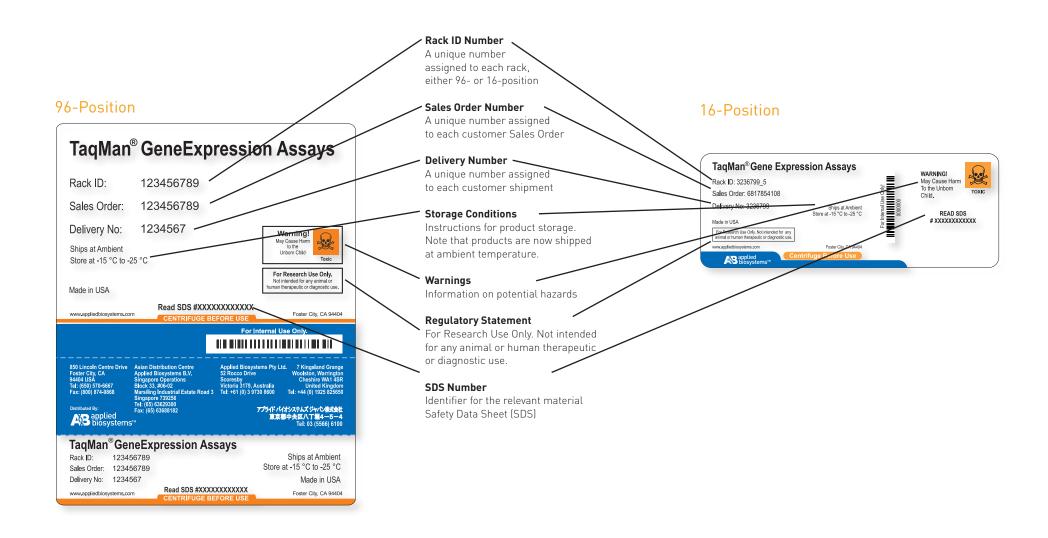
8 F T PLEA	SE READ		and insp Notify A 48 hours	UPON ARRIVAL et contents immediately, spiled Biosystems within of receipt of any damage d/or discrepancies. DELIVERY NUMI Applied Biosystem NOISE R2.1 OTR Anna Lam Building D 6055 Sunol Blvd Pleasanton CA 9 SPECIAL INSTR	BER: 881	ING UST 1 OF 7 862988
SHIP	VIA	2 P.O.				
ederal Ex	press PO	NOISE R2.1 OTR	-			
DATE SH	IIPPED	CONDITIONS/TERMS	4 (ORDER NO.		
12/11/2	2009	Net 30 Days	1	186168296		
ITEM	PRODUCT N	UMBER DESCRIPTION	BA	TCH NUMBER/REMARKS		QUANTITY 9 PENDING
0001	4426961	H#00404299_s1,MOL1980000,1980 TAQMAN [®] NON-CODING RNA ASSAY,		1005425	1.00	
0003	4426961	Hs03296549_s1,MOL1980000,1980 TAQMAN [®] NON-CODING RNA ASSAY,		1005426	1.00	
0005	4426961	Hs03296582_s1,MOL1980000,1980 TAQMAN [®] NON-CODING RNA ASSAY,		1005427	1.00	
0007	4426961	Hs03296602_m1,MOL1980000,1980 TAQMAN [®] NON-CODING RNA ASSAY,		1005428	1.00	
0009	4426961	Hs03296892_s1,MOL1980000,1980 TAGMAN [®] NON-CODING RNA ASSAY,		1005429	1.00	
0011	4426961	Hs03297669_s1,MOL1980000,1980 TAQMAN® NON-CODING RNA ASSAY,		1005430	1.00	
0013	4426961	H803454539_m1,MOL1980000,1980 TAQMAN [®] NON-CODING RNA ASSAY,		1005431	1.00	
0015	4426961	H#03464472_m1,MOL1980000,1980 TAQMAN® NON-CODING RNA ASSAY,	000000 SMALL SCALE	1005432	1.00	
0017	4426962	HS00404299_S1,MOL1980000,1980 TAQMAN® NON-CODING RNA ASSAY,		1005435	1.00	
0019	4426962	Hs03296549_s1,MOL1980000,1980 TAQMAN® NON-CODING RNA ASSAY,		1005436	1.00	
		Hs03296602 ml,MOL1980000,1980			1.00	

Storage Racks



Your shipment will contain either 96- or 16-position racks.

Labels with order- and product-specific information cover the racks, as illustrated by the following examples.



Tube Labeling



All tube labels contain five lines of text that follow a consistent labeling format. For example:

Assay ID (for kit products, Assay ID is preceded by "RT:" or "TM:")	Rn01648213_m1	
Product-specific information, e.g., gene symbol, RS number, assay name, dye label, primer limited (PL)	SLC25A14	
Part Number, volume, and assay concentration	PN4351372 360 µL 20x	
Expiration Date and Internal Processing Code	Exp. Date: 07/2013 62E01	
Lot Number and Manufacturing Order Group Well Location ———————————————————————————	Lot: P081209-000 A01	

The bottom of each tube is also labeled with a vial ID (2-dimensional bar code format). Users should track vial IDs if assays are moved to a different container.

Compact Disc (CD)

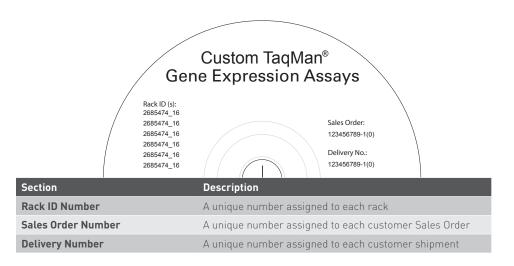
Contents

The CD(s) provided with your shipment contain(s) some or all of the following documents, depending on which TaqMan[®] Assay products were included in your order.

- Data Sheet
- Assay Information File(s)
- Protocol(s) and User Guide(s)
- Quick Reference Card(s)
- Product Insert(s)
- Certificate(s) of Analysis
- Safety Data Sheet(s)
- Understanding Your Shipment

Labels

Selected order-specific information is located on the CD label. For example:

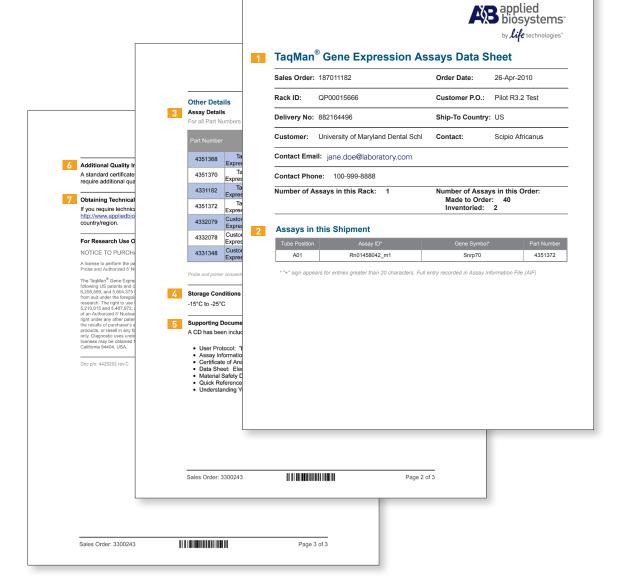


Data Sheet

AB applied biosystems™ by *life* technologies"

The Data Sheet provides a summary of the assays in a specific rack, as well as supporting details for those assays. For example:

Document Section	Description
Order Summary Table	A summary of your order, including the order date, customer P.O. and contact information, Sales Order and Rack ID Numbers, number of assays in the rack, and the number of assays ordered
2 Assays in this Shipment	Identification of the assays in your shipment by the Assay ID, target name, tube position in the rack, and Part Number
8 Assay Details	Details of the assay formulation, including the product description, reporter/quencher, fill volume, concentration, and number of reactions
4 Storage Conditions	Instructions for product storage
5 Supporting Documentation	Additional assay-related documentation that can be found on the CD(s) enclosed with your shipment
6 Additional Quality Information	Instructions for obtaining additional quality- related information
7 Obtaining Technical Support	Instructions for obtaining Applied Biosystems Technical Support





The Assay Information File (AIF) contains reference information about your order and technical details of all assays in the shipment. It is in a folder labeled with the Rack or Plate ID on the information CD accompanying your order.

The AIF may be provided in TXT format, and/or in both XML and HTML formats, depending on the product line and order date.

- HTML-format AIFs are provided as a reference for users; open them in a web browser.
- XML- and TXT-format AIFs are provided primarily for electronic data importation and manipulation.

Definitions for AIF Fields (Alphabetical)

Field Name	Description
Amino Acid Change	(SNP genotyping assays only) The amino acid change associated with a coding SNP
Amplicon Size	Size of the PCR amplification product
Annotation Source	Public annotation source used for a specific product family
Assay ID	Alphanumeric string that identifies the assay
Assay Mix Concentration	Concentration of the assay mix (including all primers and probe components)
Assay Name	For custom products, the customer-designated name of the sequence submitted; for predesigned assays, the Life Technologies-designated name assigned at the time of assay design
Category	(Copy number assays only) Chromosome(s) targeted by the assay, based on Celera* Panther Protein Classification, Level 1
Category ID	(Copy number assays only) Unique 10-digit ID for the category name
Celera* Assembly Build Number	(SNP genotyping assays only) The version of the Celera* assembly from which the coordinate position is taken
Celera* ID (for Predesigned assays)	For Predesigned TaqMan [®] Gene Expression and SNP Genotyping Assays, this refers to the Celera* ID—a unique transcript or SNP ID, respectively, in the Celera Discovery System (CDS)
Celera* SNP ID	(SNP genotyping assays only) The hCV SNP number in the Celera* Discovery System (CDS)
Chromosome	Chromosome on which the assay target (e.g., gene, SNP, intergenic region) is found
Contact Name	Customer contact name provided with order submission
Component Type	For kit products, this differentiates TM (TaqMan® Assay) or RT (Reverse Transcription primer) component
Context Sequence	Nucleotide sequence surrounding the TaqMan® probe. For SNP genotyping assays, the sequence surrounding the target SNP. The first nucleotide in the brackets corresponds to the VIC® allele and the second to the FAM™ allele. For TaqMan® MicroRNA Assays, the mature microRNA sequence itself.
Customer Name	Name of the customer's organization or institution
Cytogenetic Band	Cytoband/chromosomal band location of assay target sequence
Delivery Number	Unique number assigned to each customer shipment
Design Strand	Strand used to design the TaqMan® probe
DGV Database** Version	(Copy number assays only) Reference genome assembly version used by the Database of Genomic Variants (DGV)
DGV** Locus Location	(Copy number assays only) Position on the reference genome of the DGV Locus
DGV** Variation ID	(Copy number assays only) Target DGV Variation ID



DGV** Variation Type	(Copy number assays only) Type of genomic variation; for example, Copy Number
Distance to Stem-Loop	(MicroRNA assays only) Distance from TaqMan® MicroRNA Assay context sequence to the base of the stem-loop sequence
Entrez Gene ID	The Entrez Gene database numeric identifier for the interrogated gene (http://www.ncbi.nlm.nih.gov/gene)
Forward Primer Concentration	Concentration (in µM) of the forward PCR primer
Forward Primer Name	Name of the forward PCR primer, given by the design software; consists of the Assay ID or Assay Name, with an F suffix
Forward Primer Sequence	Nucleotide sequence of the forward PCR primer
Gene Name	Gene name in the Entrez Gene database
Gene Symbol	Entrez Gene symbol for the interrogated gene
Group	(Copy number assays only) Based on Celera* Panther Protein Classification, Level 2
Group ID	(Copy number assays only) Unique 10-digit ID for the group name
HapMap Minor Allele Freq—CEU	(SNP genotyping assays only) Minor allele frequency in CEPH (Utah residents with ancestry from northern and western Europe), as calculated by the HapMap Project
HapMap Minor Allele Freq—CHB	(SNP genotyping assays only) Minor allele frequency in Han Chinese in Beijing, China, as calculated by the HapMap Project
HapMap Minor Allele Freq—JPT	(SNP genotyping assays only) Minor allele frequency in Japanese in Tokyo, Japan, as calculated by the HapMap Project
HapMap Minor Allele Freq—YRI	(SNP genotyping assays only) Minor allele frequency in Yorubans in Ibadan, Nigeria, as calculated by the HapMap Project
Location on Celera* Assembly	(SNP genotyping assays only) The nucleotide location on the Celera* human genome assembly (as referenced)
Location on NCBI Assembly	Nucleotide location on the NCBI genome assembly of the assay target. It is near the base location in the middle of the context sequence.
Lot Number	Unique identifier assigned to each manufacturing lot
Location on Transcript or Gene	The assay's nucleotide location on the target transcript or gene. For TaqMan [®] Gene Expression Assays, it is the target location on the first RNA accession that is listed. For TaqMan [®] Copy Number Assays, it is the exon and/or intron gene location.
Mapping Date	Date that Life Technologies completed assay mapping
Mature MicroRNA Accession	(MicroRNA assays only) miRBase ⁺ microRNA name
Mature MicroRNA ID	(MicroRNA assays only) miRBase ⁺ microRNA alphanumeric identifier
Medline Reference	PubMed references for the gene
Minor Allele Frequency—Caucasian	(SNP genotyping assays only) Minor allele frequency in Caucasians, as calculated by SNP genotyping at Life Technologies
Minor Allele Frequency—Chinese	(SNP genotyping assays only) Minor allele frequency in Chinese people, as calculated by SNP genotyping at Life Technologies
Minor Allele Frequency—Japanese	(SNP genotyping assays only) Minor allele frequency in Japanese people, as calculated by SNP genotyping at Life Technologies
Minor Allele Frequency—African- American	(SNP genotyping assays only) Minor allele frequency in African-Americans, as calculated by SNP genotyping at Life Technologies
NCBI Assembly Build Number	The version of the NCBI reference genome assembly used for assay target location
NCBI Gene Reference	NCBI transcript ID that is detected by the assay
NCBI Reference SNP ID	(SNP genotyping assays only) The reference SNP number (RS Number) in the NCBI-dbSNP database
NCBI SNP Reference	(SNP genotyping assays only) Reference from the NCBI-dbSNP database
Order Number	Life Technologies-assigned customer sales order number, unique to an order



Part Number ⁺⁺	Product number used in conjunction with the Assay ID to order the assay
Product Type	Life Technologies product category or family (corresponds with the part number)
Rack or Plate ID	Unique number on the label of each rack or plate; also referred to as Rack ID
Rack or Plate Type	Type of container in which the assay is shipped (e.g., 96- or 16-position rack)
Reporter 1 Concentration	Concentration (in µM) of reporter 1 TaqMan® probe
Reporter 1 Dye	Dye label for reporter 1 TaqMan® probe
Reporter 1 Name	Name for the reporter 1 TaqMan® probe, determined by the design software. It consists of the Assay ID or Assay Name, with a suffix that contains a letter to indicate the dye label (M for FAM™ dye and V for VIC® dye). Some assays also include a number to indicate which DNA strand was used to design the probe: 1 indicates that the forward strand was used to design the probe; 2 that it was the reverse strand; and 3 that the design strand is not identified.
Reporter 1 Quencher	Quencher used for reporter 1 TaqMan® probe, e.g., nonfluorescent quencher (NFQ)
Reporter 1 Sequence	Nucleotide sequence of reporter 1 TaqMan® probe
Reporter 2 Concentration	(SNP genotyping assays only) Concentration (in µM) of reporter 2 TaqMan® probe
Reporter 2 Dye	(SNP genotyping assays only) Dye label for reporter 2 TaqMan® probe
Reporter 2 Name	Name for the reporter 2 TaqMan [®] probe, determined by the design software. It consists of the Assay ID or Assay Name, with a suffix that contains a letter to indicate the dye label (M for FAM TM dye). Some assays also include a number to indicate which DNA strand was used to design the probe: 1 indicates that the forward strand was used to design the probe; 2 that it was the reverse strand; and 3 that the design strand is not identified.
Reporter 2 Quencher	(SNP genotyping assays only) Quencher used for reporter 2 TaqMan® probe
Reporter 2 Sequence	(SNP genotyping assays only) Nucleotide sequence of reporter 2 TaqMan® probe
Reverse Primer Concentration	Concentration (in µM) of the reverse PCR primer
Reverse Primer Name	Name for the reverse primer, given by the design software; consists of the Assay ID or Assay Name, with an R suffix
Reverse Primer Sequence	Nucleotide sequence of the reverse PCR primer
RNA Database [‡] Gene Symbol	The RNA database gene symbol for the interrogated gene product
RNA Database ID	The RNA database identifier for the interrogated gene
RT Primer Sequence	Sequence of the RT primer for the interrogated transcript
Sanger dB Link	(MicroRNA assays only) Link to microRNA page on the miRBase ⁺ database website (based on accession #)
Sales Order Number	Life Technologies-assigned customer sales order number, unique to an order
Ship Date	Date that the product is shipped
Shipment ID	Unique number assigned to each customer shipment
(Shipping) Rack or Plate ID	Unique number on the label of each rack or plate; also referred to as Rack ID
(Shipping) Rack or Plate Type	Type of container in which the assay is shipped (e.g., 96- or 16-position rack)
SNP Type	(SNP genotyping assays only) Type of SNP, e.g., intron, acceptor splice site, donor splice site, intergenic/unknown, etc.
Species	Organism for which the assay was designed
Stem-Loop Chromosome Location	(MicroRNA assays only) Genomic position of stem-loop sequence
Stem-Loop ID	(MicroRNA assays only) miRBase ⁺ stem-loop alphanumeric identifier



Target Exons	Exon(s) (as referenced by the public accession number) that are spanned by the probe
Target Type	Target sequence identifier (e.g., Gene Symbol, Reference SNP (RS) Number, etc.)
Target Value	Publicly available gene or RNA name, or customer-provided identifier
Transcript Accession	The NCBI alphanumeric sequence identifier for the interrogated transcript
Tube/Well Position	Well location of the assay in the rack or plate
Vial (or Tube) ID	10-digit number that uniquely identifies each tube
Vial (or Tube) Type	Type of vial or tube containing the assay
Well Location	Well location of the assay in the rack or plate
XML Template Version	Version of the XML template used for the Assay Information File

* Historical reference to Celera Discovery System.

Database of Genomic Variants (DGV), http://projects.tcag.ca/variation/. lafrate AJ, Feuk L, Rivera MN et al. (2004) Detection of large-scale variation in the human genome. *Nat Genet* 36(9):949–51. miRBase microRNA database, http://www.mirbase.org. Griffiths-Jones S, Saini HK, van Dongen S, Enright AJ (2008) *Nucl Acids Res* 36(Database Issue):D154–D158. **

+

 + Part numbers for Predesigned, Custom, and Custom Plus Assays reflect assay scale and whether human or nonhuman.
+ Mammalian noncoding RNA database (RNAdb), http://research.imb.uq.edu.au/rnadb/. Pang KC, Stephen S, Engstrom PG et al. (2005) RNAdb - a comprehensive mammalian noncoding RNA database. *Nucl* Acids Res 33 (Database Issue): D125-D130.

Protocols and User Guides



A specific set of user instruction documents is provided with each TaqMan® Assay product. These documents may include protocols, quick reference cards, and user guides for products and software. For example, user documents provided with TaqMan® and Custom TaqMan® Gene Expression Assays include the following:

User Protocol

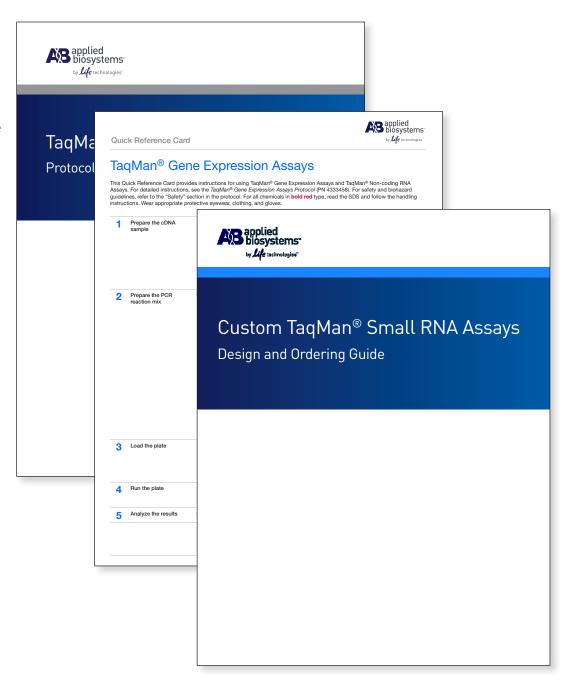
The User Protocol is a detailed guide that provides step-by-step instructions for using the product.

Quick Reference Card

The Quick Reference Card summarizes the key steps in the User Protocol and is especially useful for experienced users.

Design and Ordering Guide

Custom TaqMan[®] Gene Expression Assays also include the Design and Ordering Guide, which provides step-by-step instructions for designing and ordering Custom TaqMan[®] Gene Expression and Genotyping products.



Certificate of Analysis



The Certificate of Analysis contains assay quality information.

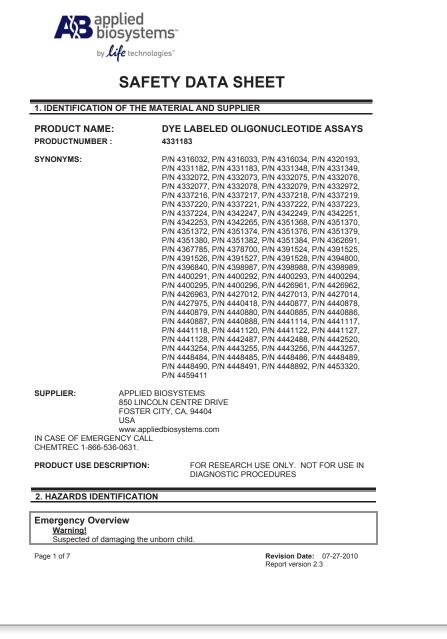
Section	Description
1 Sales Order	A unique number assigned by Applied Biosystems to each customer Sales Order
2 Delivery Number	A unique number assigned by Applied Biosystems to each customer shipment
3 Ship Date	The date the product is packaged for shipment (mm/dd/yyyy)
4 Part Number	The number used for (re)ordering the product; sometimes referred to as the Product Number
5 Part Description	Unique name for part and scale, based on Part Number
6 Assay ID	A unique identifier assigned by Applied Biosystems to each assay
7 Assay-Related Target	Field heading and content varies by TaqMan® Assay type: e.g., Gene Symbol for gene expression assays, RS Number for SNP assays, Gene Identifier for non-coding RNA; or Assay Name for custom, small RNA, pri-miRNA, etc., assays
8 Lot Number	A unique identifier assigned to each manufacturing batch; allows Applied Biosystems to identify the manufacturing site and date of manufacture
Expiration Date	The date after which the material should no longer be used by the customer
10 Quality Control	List of quality control tests, confirmation that they were completed, and results. Fill Volume: Result is pass/fail Mass Spectrometry: Result is pass/fail Genomic Functional Test (SNP assays only): Result is pass/fail/previously passed Baseline Check (Custom Small RNA assays only): Result is pass/fail Concentration (MicroRNA & siRNA assays only): Result is pass/fail No-Template Control (MicroRNA & siRNA assays only): Result is pass/fail
11 Regulatory Statement	For Research Use Only. Not intended for any animal or human therapeutic or diagnostic use.



Safety Data Sheet



The material Safety Data Sheet (SDS) provides important safety information about your shipment. It includes information on the composition and properties of hazardous materials in the shipment; handling, storage, and disposal of these materials; and regulatory information.



Glossary of Commonly Used Terms



Term	Definition
Assay ID	A unique identifier assigned to each assay by Applied Biosystems
Delivery Number	A unique number assigned to each customer shipment
Lot Number	A unique identifier assigned to each manufacturing batch; allows us to identify the manufacturing site and date of manufacture
Part Number	The number used for (re)ordering the product; sometimes referred to as the Product Number
Rack ID Number	A unique number assigned to each rack—either 96- or 16-position
Sales Order Number	A unique number assigned to each customer Sales Order
Ship Date	The date that the product is packaged for shipment
Shipping Rack or Plate Type	The type of container in which the assay is shipped (e.g., 96- or 16-position tube rack)
Vial or Tube ID	2D bar code and 10-digit number that uniquely identify each vial/tube

Technical Support

If you need technical assistance, go to **www.appliedbiosystems.com/support/contact/** and use the drop-down box to select your country/region.

Phone and fax numbers for your specific country/region will be provided.

Life Technologies offers a breadth of products DNA | RNA | protein | cell culture | instruments

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