MegaPlex™ Primer Pools

Catalog Numbers 4399966, 4399970, 4399233, 4399203, 4444281, 4444303, 4444292, and 4444308

Pub. No. 4401697 **Rev.** E

WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from **thermofisher.com/support**.

Product description

Applied Biosystems™ MegaPlex™ RT Primers greatly streamline the workflow for quantitating up to 381 microRNAs in parallel by enabling reverse transcription of cDNA for all microRNAs in a single reaction; they are available for human and rodent (mouse and rat) species. A companion pool of Applied Biosystems™ MegaPlex™ PreAmp Primers enables an optional preamplification step to be added to the workflow in situations where sample is limiting, or sensitivity is of the utmost importance. For comprehensive coverage, two pools each (pool A and pool B) of MegaPlex™ RT Primers and MegaPlex™ PreAmp Primers are available for human and rodent species, respectively. The MegaPlex™ solution can be run either with individual TaqMan™ MicroRNA Assays or, for the ideal profiling workflow, with matched TaqMan™ Array MicroRNA Cards.

Contents and storage

Cat. No.	Primer pool	Contents	Storage
MegaPlex™ RT Primers			
4399966	Human Pool A v2.1	• RT primers (1 tube) • $MgCl_2$ (1 tube) • 50 reactions	Ships at ambient temperatures. Store the MegaPlex™ RT primer pools at –25°C to –15°C.
4444281	Human Pool B v3.0		
4399970	Rodent Pool A v2.0		
4444292	Rodent Pool B v3.0		
MegaPlex™ PreAmp Primers			
4399233	Human Pool A v2.1	PreAmp primers (1 tube; 50 reactions)	Ships at ambient temperatures. Store the MegaPlex™ PreAmp primer pools at –25°C to –15°C.
4444303	Human Pool B v3.0		
4399203	Rodent Pool A v2.0		
4444308	Rodent Pool B v3.0		

Workflow

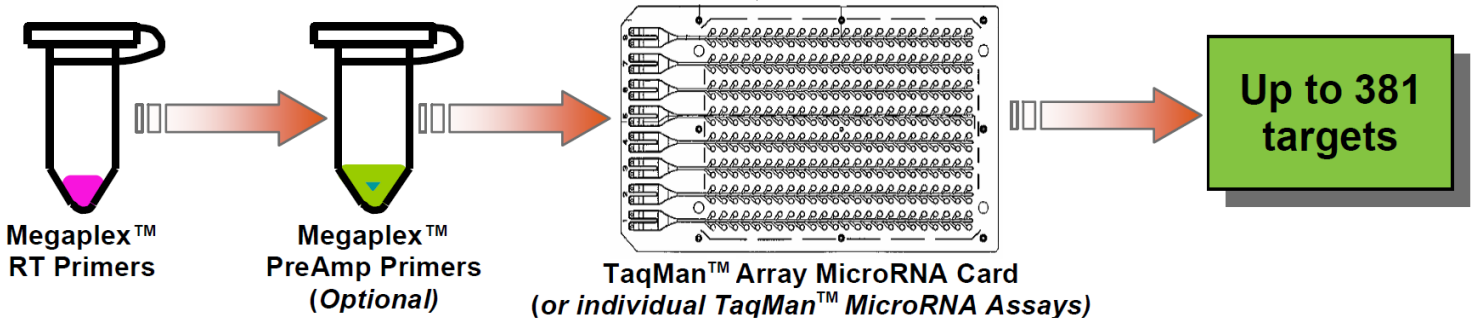

Fig. 1 Workflow using MegaPlex™ primer pools and TaqMan™ Array MicroRNA Card

Data normalization

Each TaqMan™ Array Card of the two-card set (either human or rodent) contains identical candidate endogenous control assays that provide a variety of options for normalization.

Endogeneous control	Species	Comments
Mammalian U6	Human, mouse, and rat	Repeated 4x on card enabling monitoring of assay reproducibility
RNU48	Human	Small nucleolar RNA
RNU44	Human	Small nucleolar RNA
snoRNA135	Mouse	Small nucleolar RNA
snoRNA202	Mouse	Small nucleolar RNA
U87	Rat	Small nucleolar RNA
Y1	Rat	Small non-coding RNA
ath-miR159a	*Arabidopsis*	Not detectable in mammalian species For use as a negative or processing control

For more information on data normalization, see the Application Note *Endogenous Controls for Real-Time Quantitation of miRNA Using TaqMan™ MicroRNA Assays* (Pub. No. 127AP11-01).

MegaPlex™ assay performance

MegaPlex™ RT and PreAmp Primers are highly multiplexed pools designed to significantly streamline the workflow when profiling many miRNA targets in a single experiment. When combined in a large multiplex pool, a small subset of assays exhibit lower no-template-control (NTC C_T values < 35) values than when run individually. This is not an assay design issue. In the interest of providing the broadest coverage possible, customers have requested that we include these assays on the profiling array, but with the expectation that they are to be considered semi-quantitative. As a result, fold-change measurements using these assays may be less than the true value. To aid data interpretation, the identity of these assays is provided in the MegaPlex™ Assay Performance File. If accurate fold-change measurements for these assays is required, we recommend that changes detected using the MegaPlex™ assay workflow be validated using the corresponding individual TaqMan™ MicroRNA Assay.

MegaPlex™ Assay Performance File

The MegaPlex™ Assay Performance File is provided on the CD accompanying the TaqMan™ Array MicroRNA Cards.

File	Cat. No.
MEGAPLEX ASSAY PERFORMANCE FILE_HUMAN A v2.1	4403210
MEGAPLEX ASSAY PERFORMANCE FILE_HUMAN B v3.0	4428133
MEGAPLEX ASSAY PERFORMANCE FILE_RODENT A v2.0	4403212
MEGAPLEX ASSAY PERFORMANCE FILE_RODENT B v3.0	4455463

Documentation

Supporting documentation is included on the CD accompanying the TaqMan™ Array MicroRNA Cards, and is available at **thermofisher.com**.

Publication	Pub. No.
MegaPlex™ Pools for microRNA Expression Analysis Protocol	4399721
MegaPlex™ Pools Quick Reference Card	4399813

Limited product warranty

Life Technologies Corporation and/or its affiliate(s) warrant their products as set forth in the Life Technologies' General Terms and Conditions of Sale found on Life Technologies' website at **www.thermofisher.com/us/en/home/global/terms-and-conditions.html**. If you have any questions, please contact Life Technologies at **www.thermofisher.com/support**.

Table 1 Revision history of Pub. No. 4401697

Revision	Date	Description
E	21 March 2016	Format, style, and legal updates
D	09 June 2010	Baseline for this revision history

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