BIOARRAY™ Single-round RNA amplification and biotin labeling system (100 reaction)

The Enzo Life Sciences' 100-Reaction Single-Round RNA Amplification and Biotin Labeling System provides an optimized protocol and reagents for the production of biotin-labeled antisense RNA (aRNA) from total cellular RNA samples (1µg-5µg) in less than 24 hours for array analysis. While cDNA quantities produced are sufficient for gene expression, manual sample preparation involving multiple enzymatic reactions and product purification steps are time consuming and error-prone. The 100-Reaction Single- Round RNA Amplification and Biotin Labeling System has been optimized for superior performance across several automated liquid handling platforms.

Improved data quality and analysis results through greater biotin incorporation.

The result is a comprehensive system that reduces variability while subsequently improving reproducibility, data quality and throughput for automated genomic environments.

The complete system is composed of reagents for cDNA synthesis and *in vitro* transcription labeling and does not provide materials required for purification.

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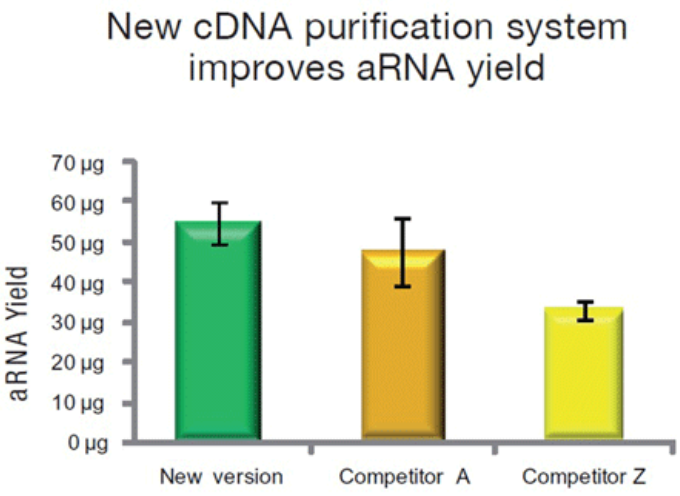
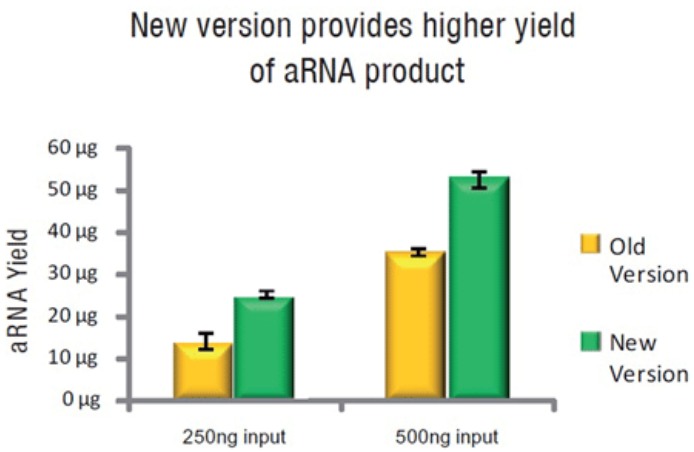
ENZ-42421-100	100Reactions

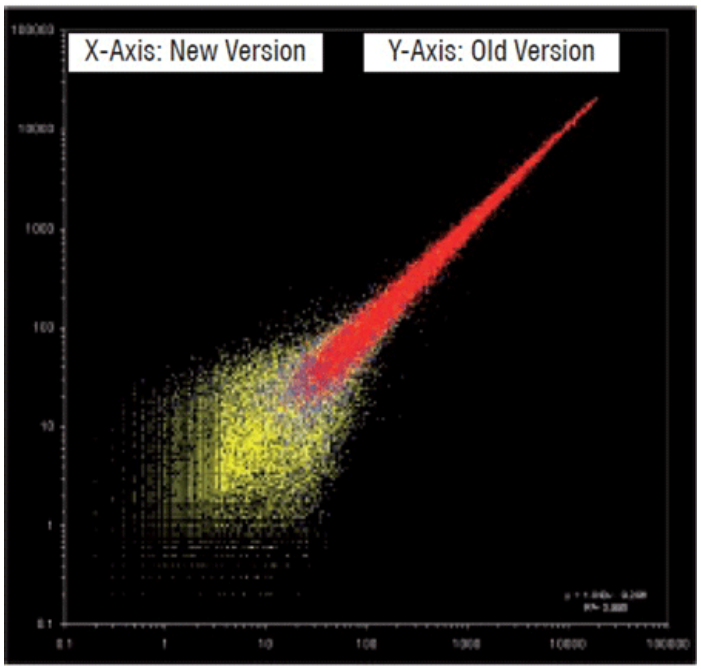
Manuals, SDS & CofA View Online »

- Gold standard transcript labeling system maintains the value of legacy data
- Incorporation of two biotin nucleotides yields brighter signal, improving data from microarray experiments
- Convenient workflow with a flexible 4-16 hour transcription time and reagents supplied in a ready-to-use format.
- Decreases experimental variation and standardizes biological data derived from microarrays with the universally accepted system.
- Enables correlation of results from experiment-to-experiment, project -to-project and lab-to-lab.
- Production of large amounts of biotin-labeled RNA targets by *in vitro* transcription available separately with our BIOARRAY HIGHYIELD® RNA Labeling Kit (Prod. No. ENZ-42655)





The old and new versions of the Single-round RNA Amplification and Biotin Labeling System were used to amplify 250 and 500ng of Universal Human Reference RNA (Stratagene #740000). Reactions were performed in triplicate. The average yields are plotted with standard deviation shown as error bars.



aRNA was generated from the old and new version of the kit in one experiment. Equal quantities of aRNA were hybridized to Affymetrix HU133 plus 2.0 expression arrays. Signal intensity obtained from the two arrays show a correlation value of 0.995.

Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended.
Handling	Avoid freeze/thaw cycles.
Long Term Storage	-20°C
Shipping	Dry Ice

Regulatory Status

RUO - Research Use Only

Product Details

Contents

400 µL, dNTP Mix (dN); 100 µL, Promoter Primer (P); 200 µL, First Strand Buffer (FB); 800 µL, DTT (D);100 µL, Reverse Transcriptase (RT); 100 µL, RNase Inhibitor (I); 500 µL, DNA Polymerase (DP); 100 µL, RNase H (RH); 1.5 mL, Second Strand Buffer (SB); 600 µL, IVT Reaction Buffer (RB); 600 µL, 10x Biotin-Labeled Ribonucleotides (B); 600 µL, Enhancer Cocktail (EC); 300 µL, T7 RNA Polymerase (T7); 13 mL, Nuclease-free Water (W)

Quality Control

Performance Testing:
Biotin-labeled aRNA is generated from 500 ng of human reference total RNA following the procedures in the User Manual. Labeled aRNA is purified and yield determined by absorbance using a UV/Vis spectrophotometer. Determination of labeled aRNA transcript size is performed by capillary electrophoresis. Hybridized of aRNA to Affymetrix GeneChip HU133 2.0 Plus microarrays serves as a final functional test.

Minimum Specifications:

- aRNA yield must be > 23 µg.
- aRNA purify must range between an A260/A280 ratio of 1.9 and 2.3.
- aRNA size must be equal to or greater than 1200 nt.
- Affymetrix GeneChip criteria:
    - % Present calls > than 40%
    - Scale factors < 3.0
    - 5’/3’ ratios for actin and GAPDH ~ 1.0 ± 0.3

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ENZO LIFE SCIENCES, INC.
Phone: 800.942.0430
info-usa@enzolifesciences.com

European Sales Office
ENZO LIFE SCIENCES (ELS) AG
Phone: +41 61 926 8989
info-eu@enzolifesciences.com

Belgium, The Netherlands & Luxembourg
Phone: +32 3 466 0420
info-be@enzolifesciences.com

France
Phone: +33 472 440 655
info-fr@enzolifesciences.com

Germany
Phone: +49 7621 5500 526
info-de@enzolifesciences.com

UK & Ireland
Phone (UK customers): 0845 601 1488
Phone: +44 1392 825900
info-uk@enzolifesciences.com