BIOARRAY™ Single-round RNA amplification and biotin labeling system

Improved data quality and analysis results through greater biotin incorporation.

The 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 in less than 24 hours for array analysis. This kit has been improved to yield sufficient aRNA quantity for most microarray platforms (10 µg minimum) with total RNA input of as low as 250 ng and as high as 5000 ng. The higher yield results from an improved cDNA purification system, now provided with the kit.

The Single-Round RNA Amplification and Biotin Labeling System has been optimized for superior performance with reduced variability and improved reproducibility and data quality. The complete system is composed of reagents for cDNA synthesis and purification and *in vitro* transcription labeling.

Note: Control RNA (100µg/ml) (Prod. no. ENZ-42406-CR) is available separately.

Citations: 13 View Online »

Ordering Information

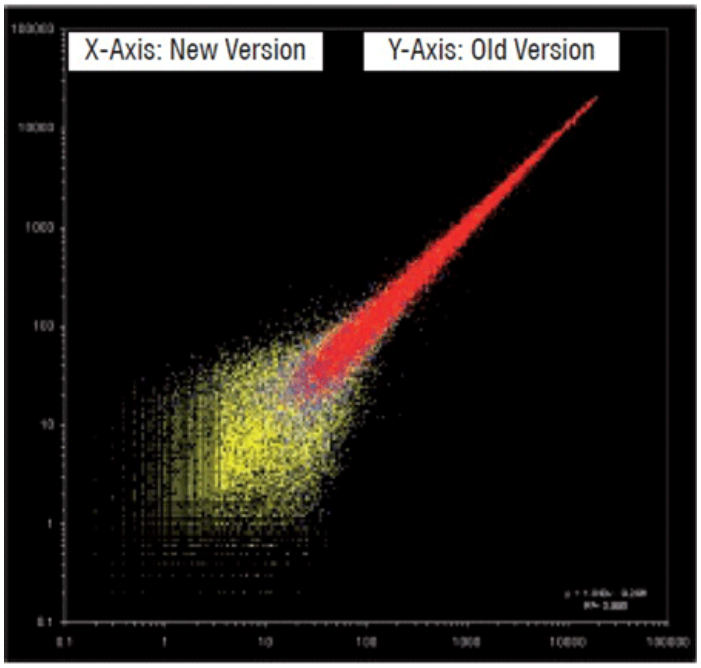
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ENZ-42420-10	10Reactions

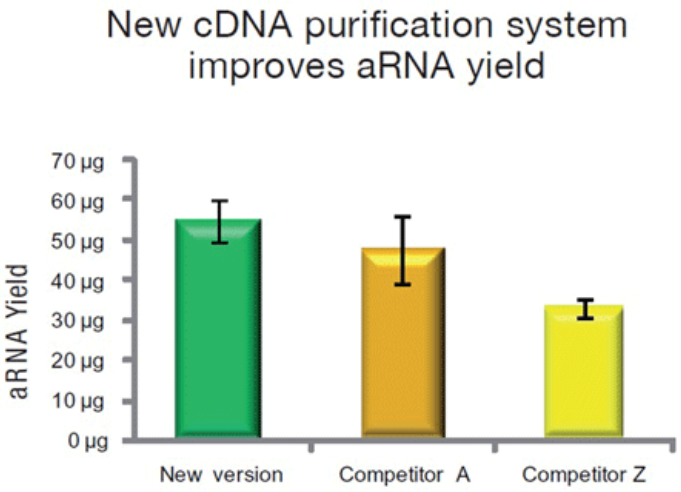
Manuals, SDS & CofA

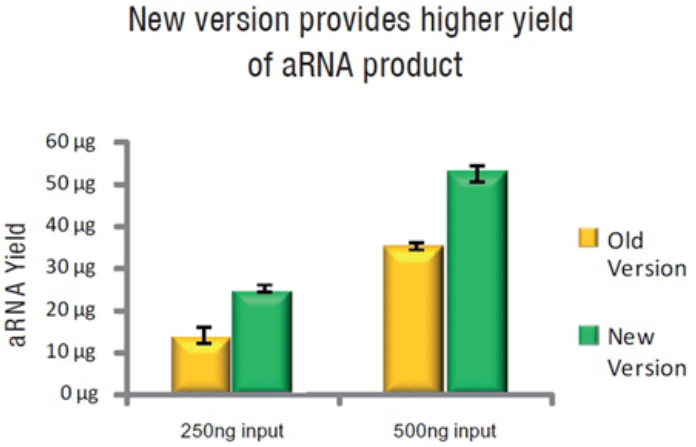
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- Maintains the value of legacy data by the continued use of Enzo kit, the gold standard for GeneChip® visualization.
- Decreases experimental variation and standardizes biological data derived from microarrays with the universally accepted system.
- Maximizes incorporation efficiency and produces strong, clear displays by utilizing two biotin-labeled nucleotides and a high quality T7 polymerase.
- Convenient workflow with a flexible 4-16 hour transcription time and reagents supplied in a ready-to-use format.
- Enables correlation of results from experiment-to-experiment, project-to-project and lab-to-lab.



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.





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.

Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended. Store Box A at -20˚C in a non-frost free freezer. Store Box B at ambient condition.
Handling	Avoid freeze/thaw cycles.
Long Term Storage	-20°C
Shipping	Dry Ice

Regulatory Status

RUO - Research Use Only

Product Details

Contents

Box A:

40 µl, dNTP Mix (dN)
10 µl, Promoter Primer (P)
20 µl, First Strand Buffer (FB)
80 µl, DTT (D)
10 µl, Reverse Transcriptase (RT)
10 µl, RNase Inhibitor (I)
50 µl, DNA Polymerase (DP)
10 µl, RNase H (RH)
150 µl, Second Strand Buffer (SB)
60 µl, IVT Reaction Buffer (RB)
60 µl, 10x Biotin-Labeled Ribonucleotides (B)
60 µl, Enhancer Cocktail (EC)
30 µl, T7 RNA Polymerase (T7)
2.5 mL, Nuclease-free Water (W)

Box B:

4.5 ml, cDNA Binding Buffer (BB)
1.2 ml, 5X Wash Solution (WS)
10 cDNA Purification Columns
10 cDNA Elution Tubes
10 Collection Tubes

Quality Control

- aRNA yield is ≥23µg
- aRNA purity range is between an A_{260}/A_{280} ratio of 1.9 and 2.3
- Median aRNA size is 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

Last modified: May 29, 2024

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