

BIOARRAY™ Low Input RNA Amplification and Biotin Labeling System

The BIOARRAY™ Low Input RNA Amplification with 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 20 ng and up to 500 ng. Entire amplification reaction can be performed in a single tube and the biotin-labeled aRNA can be purified using either magnetic beads or purification columns. The BIOARRAY™ Low Input aRNA 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 *in vitro* transcript labeling.

Citations: 1

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Ordering Information

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ENZ-42422-0010	10Reactions
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Manuals, SDS & CofA

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- Single tube reaction for amplification and labeling
- Generates sufficient aRNA for standard microarray analysis from as little as 20 ng of total input RNA
- Superior 3'/5' transcript ratios demonstrating efficient *in vitro* transcription
- 3'/5' ratios significantly better, as Enzo kit completes transcript through the 5' end

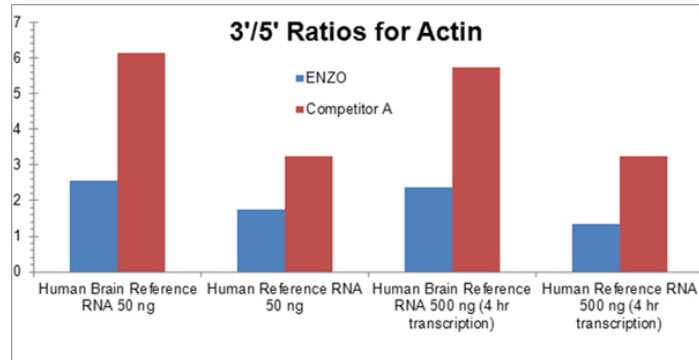


Figure 1: Quality assessment of aRNA obtained using BIOARRAY™ Low Input RNA Amplification and Biotin Labeling System. The 3'/5' ratios, on an Affymetrix U133a array, for housekeeping gene Actin obtained using Enzo kit are much lower than the ones from the competitor's indicating higher quality of aRNA obtained using Enzo kit.

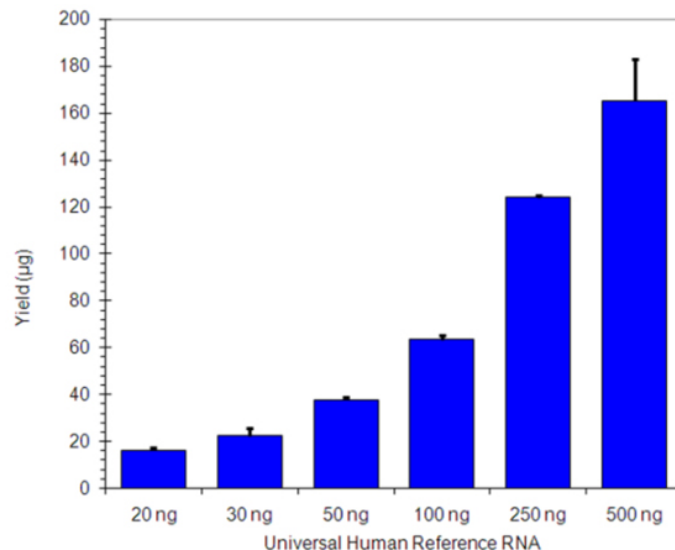


Figure 2: Universal Human Reference RNA ranging from 20 ng to 500 ng was amplified in triplicate using BIOARRAY™ Low Input RNA Amplification and Biotin Labeling System. The lowest amount of input (20 ng) generated enough labeled aRNA for Microarray Analysis.

Handling & Storage

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

Regulatory Status

RUO - Research Use Only

Product Details

Application Notes	The BIOARRAY™ Low Input RNA Amplification with 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 gene expression analysis.
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Contents	40 µl, First Strand Buffer (FSB) 10 µl, First Strand Enzyme Mix (FSE) 30 µl, Second Strand Buffer Mix (SSB) 20 µl, Second Strand Enzyme Mix (SSE) 250 µl, Transcription Buffer Mix (TB) 75 µl, DTT (DTT) 75 µl, Enhancer Cocktail (EC) 50 µl, T7 RNA Polymerase (T7) 1 ml, Nuclease-free Water (W)
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Quality Control	<ul style="list-style-type: none">• aRNA yield must $\geq 20\mu\text{g}$• aRNA purity must range between an A_{260}/A_{280} ratio of 1.9 and 2.3• aMedian aRNA size must be equal to or greater than 1200 nt• Affymetrix GeneChip criteria:<ul style="list-style-type: none">◦ % Present calls $\geq 40\%$◦ Scale factors ≤ 3.0◦ 3'/5' ratios for actin and GAPDH ~ 3.0 and 1.5 respectively
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Technical Info / Product Notes

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