

product specifications
expression bioarrays



CodeLink Rat Whole Genome Bioarray

CodeLink™ Rat Whole Genome Bioarray has 33,849 discovery probes representing up to 32,590 unique transcripts. The transcript sequences were selected from the NCBI UniGene build #129, the RefSeq database (April 1, 2004 release), and the dbEST database (March 20, 2004 release). In addition to the discovery probe sequences, each bioarray contains positive and negative bacterial control probes for monitoring array performance. All oligonucleotide probes are 30 bases long.

Probe sets	Probes/gene	Redundancy	Dispense count
Number of rat probes	33,849 unique sequences	1	33,849 probes
Positive bacterial control probes	5 probes/gene × 6 bacterial targets	8	240 probes
Negative bacterial control probes	32 negative control probes	8	256 probes
TOTAL			34,345 probes

Performance specifications

The following data are based on results from the final product verification studies conducted using a series of bioarrays and targets generated from rat tissue.

Performance parameter	Performance requirement	Verified assay performance
Specificity	Discrimination > 2 base mismatches	Discrimination > 2 base mismatches
Sensitivity	1:1,024,000 mass ratio (bacterial spike)*	1:2,048,000 mass ratio (bacterial spike) with cRNA spiking at the cRNA level*, **
Dynamic range	Linear signal response over two orders of magnitude	Linear signal response over three orders of magnitude; 0.05 pM – 50 pM
Signal reproducibility (total CV)	< 20% total median CV	8.8% total median CV across production batches 7.9% median CV for all spots excluding spots below noise
Minimum detectable fold change	95% within two-fold change for the same tissue	98.8% within two-fold change for the same tissue for all good spots across different production batches
Input sample	0.1 µg – 2 µg total RNA	0.1– 2.0 µg total RNA***

* mass ratio spiking of cRNA control spike into cRNA target

** the lowest level tested in verification experiments with cRNA spiking

*** generates sufficient amplified material for 1-8 replicates depending on tissue and starting amount

Storage and handling conditions

Upon receipt, store CodeLink™ Rat Whole Genome Bioarrays with desiccant at room temperature.

Safety precautions

Standard laboratory safety procedures should be followed when using this product. Safety glasses, a lab coat, and appropriate gloves should be worn at all times when in the laboratory.

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Applied Microarrays, Inc.
7700 S. River Parkway
Tempe, AZ 85284 USA
Email: sales@appliedmicroarrays.com
Phone : (480) 775 6320 FAX: (800) 927 9315
www.appliedmicroarrays.com

