

NimbleGen Prokaryotic Gene Expression 4x72K Microarrays

Most Extensive Line of Microbial Multiplex Catalog Designs Available

NimbleGen 4x72K microarrays for prokaryotic gene expression analysis enable you to conveniently and simultaneously hybridize 4 independent samples on each slide. These multiplex arrays offer a cost-effective approach to gene expression analysis, without compromising information content or data quality. Similar to our 385K prokaryotic arrays, a broad range of whole-genome catalog designs or custom design arrays tailored to your specific experimental goals are available.

Advantages

- Realize accurate and cost-effective analysis of 4 samples simultaneously on a single slide.
- Achieve high specificity, sensitivity, and reproducibility with long (45mer - 60mer), oligonucleotide probes.
- Utilize 72,000 features on each array:
 - Complete coverage of a transcriptome
 - Increased accuracy with multiple probes per target
 - Gain statistical power with multiple probe sets per array
- Take advantage of more than 200 catalog designs based on the most current whole-genome builds for Class I, II, and III organisms.
- Customize array content for any available, annotated genome, your focused region, or your control sequences.
- Select from two options for analysis: hybridize your samples and analyze the data in your lab using our protocols and reagents, or send your samples to us for processing in our full-service laboratory—results guaranteed.



Roche NimbleGen accelerates microbial genomics research with made-to-order, high-density, gene expression microarrays. You now have access to any microbial transcriptome on an array. Within your budget. Fast.

NimbleGen Prokaryotic Gene Expression 4x72K Microarray Performance

The high quality of gene expression data obtained with NimbleGen Gene Expression 4x72K arrays was demonstrated using *E. coli* samples on the whole-genome *E. coli* array. The high interarray reproducibility (mean $r^2 = 0.98$) and wide dynamic range (\log_2 of 4 - 16, Figure 1) of the arrays provide sensitive detection of differentially expressed genes (Figure 2).

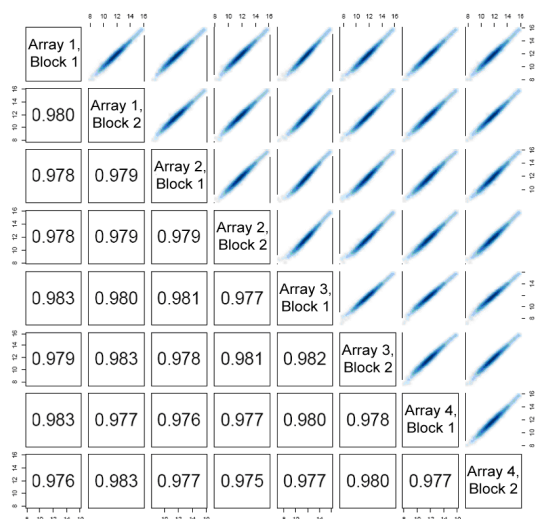


Figure 1: Reproducibility and Dynamic Range. Four technical replicates of *E. coli* RNA were hybridized to NimbleGen *E. coli* Gene Expression 4x72K microarrays. Each array contains 2 sets of probes, and each probe set was compared to all other probe sets. Interarray correlation values (mean $r^2 = 0.98$) are shown in the lower left panels and pairwise scatter plots of gene expression values (\log_2) are shown in the upper right panels. High sensitivity is demonstrated by the wide dynamic range (\log_2 of 4 - 16) of gene expression values on each array.

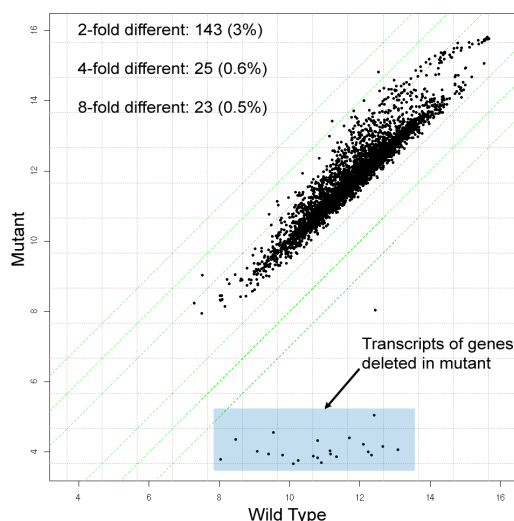


Figure 2: Sensitivity. Wild type and mutant *E. coli* RNA were analyzed on NimbleGen *E. coli* Gene Expression 4x72K microarrays. The pairwise scatter plot of gene expression values (\log_2) correctly identifies 22 transcripts encoded by genes that are present in the wild type strain but deleted in the mutant strain (blue box). The number of genes (and as percent of total genes) differentially expressed at 2-, 4-, or 8-fold are indicated in the upper left.

NimbleGen Prokaryotic Gene Expression 4x72K Microarray Specifications

Total probes	4 x 72,000
Probe length	45mer - 60mer
Probes per target	6 - 22, varies depending on transcriptome size
Replicate probe sets per array	2 - 4, varies depending on transcriptome size
Feature size	16 μ m x 16 μ m
Array size	17.4mm x 13mm
Slide size	1" x 3" (25mm x 76mm) glass



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