

## NimbleGen Prokaryotic Gene Expression Microarrays

*Choose from our extensive line of microbial catalog designs, or create your own for any microbial transcriptome*

Roche NimbleGen provides catalog or custom-made microarrays to advance your prokaryotic expression research. Our microarray catalog offers a comprehensive list of microbial designs, covering hundreds of Class I, II, and III organisms. Roche NimbleGen's high-density single and multiplex array formats allow you to tailor your research according to your needs. If your research involves testing large numbers of samples, choose from our economical multiplex array formats for increased throughput without compromising information content and data quality.

*Can't find your genome in our catalog?* Our array design scientists will consult with you to create your ideal microbial expression array from any publicly available genome database. Our iterative design approach enables you to refine your probe set selection, resulting in optimized custom microarrays that will rapidly advance your research.



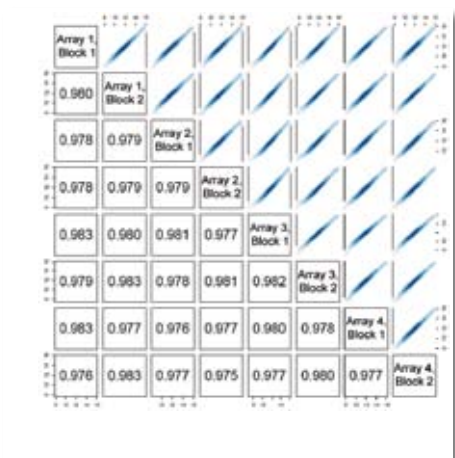
### Advantages

- **Choose from over 200 catalog designs for Class I, II, and III organisms.**
- **Increase throughput and reduce cost by conveniently analyzing up to 12 samples on a single slide**
- **Achieve high-performance gene expression analysis with multiple long (up to 60mer) oligonucleotide probes**
- **Utilize all 72,000, 135,000, or 385,000 features per array to achieve:**
  - Complete coverage of the transcriptome
  - Increased accuracy with multiple probes per target
  - Statistical power with multiple probe sets per array
  - Testing of multiple species per array
- **Customize array content for any available, annotated genome, your focused region, or your control sequences**

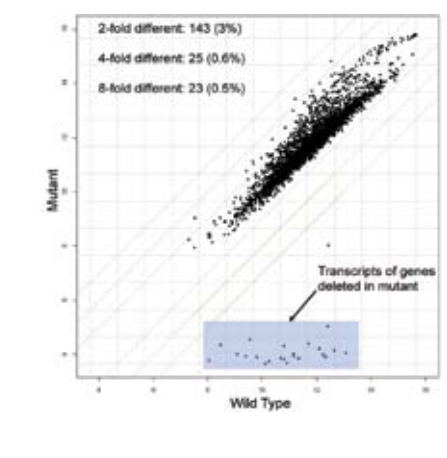
## NimbleGen Prokaryotic Gene Expression Microarray Performance

The high quality of gene expression data is demonstrated using *E. coli* samples on the NimbleGen *E. coli* Gene Expression 4x72K Whole-Genome 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.


### Ordering Information

Please see our website for a comprehensive list of prokaryotic designs:  
[www.nimblegen.com/products/exp/prokaryotic.html](http://www.nimblegen.com/products/exp/prokaryotic.html)

Microarray Formats	385K Array	4x72K Array	12x135K Array
Number of arrays per slide	1	4	12
Total features per array	385,000	72,000	135,000
Probe length	25 - 60 mer	45 - 60 mer	up to 60 mer
Probes per target*	12 - 20	6 - 22	varies
Replicate probe sets per array*	3 - 5	2 - 5	varies
Available designs	catalog and custom	catalog and custom	custom
Ordering options	 	 	 

\*Varies depending on transcriptome size

 = **Delivery Array** (Array is delivered to you. You run the experiment.)

 = **Service Array** (Data are delivered to you. Roche NimbleGen runs the experiment as service.)

Please see our website for a comprehensive list of reagents that can accompany your gene expression experiment:  
[www.nimblegen.com/kits](http://www.nimblegen.com/kits)

Roche Microarray Technical Support:  
[www.nimblegen.com/arraysupport](http://www.nimblegen.com/arraysupport)

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Published by:  
 Roche Diagnostics GmbH  
 Roche Applied Science  
 Werk Penzberg  
 82372 Penzberg  
 Germany

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