



# Data Sheet

## GeneChip® *E. coli* Antisense Genome Array

### Full Genome Expression Analysis

The GeneChip® *E. coli* Antisense Genome Array offers a comprehensive view of the *E. coli* K12 genome, interrogating more than 4,200 open reading frames (ORFs) and over 1,350 intergenic regions.

### Applications

#### UNDERSTAND BIOLOGICAL MECHANISMS

By examining the comprehensive gene expression pattern of *E. coli* under various conditions, researchers can identify biological pathways and determine the functions of uncharacterized ORFs. Inspection of sequences proximal to genes exhibiting similar expression patterns can lead to the identification of global regulatory elements.

#### EXAMINE REGIONS BETWEEN GENES

Chromosomal regions between annotated ORFs may contain shorter expressed sequences that have not yet been identified. The GeneChip *E. coli* Antisense Genome Array contains over 2,700 probe sets complementary to such regions, making the search for novel transcripts more accessible.

#### OPTIMIZE CULTURE CONDITIONS

Use the detailed pattern of gene expression offered by the GeneChip *E. coli* Antisense Genome Array in optimizing culture conditions to improve yields of recombinant proteins in industrial microbiology.

#### PROTOCOL

A cDNA synthesis protocol for non-polyadenylated prokaryotic RNA is provided for use with this array. The cDNA protocol provides equivalent assay sensitivity while starting with less material and requiring fewer steps than the previous mRNA enrichment procedure used on sense arrays.

### Array Content

The GeneChip *E. coli* Antisense Genome Array contains probes for more than 4,200 known open reading frames (ORFs) of *E. coli*. Sequence information for probes on the array corresponds to the M54 version of the *E. coli* Genome Project database at the University of Wisconsin. Additionally, the array contains probe sets for stable RNA species that do not correspond to known ORFs.

#### REFERENCES

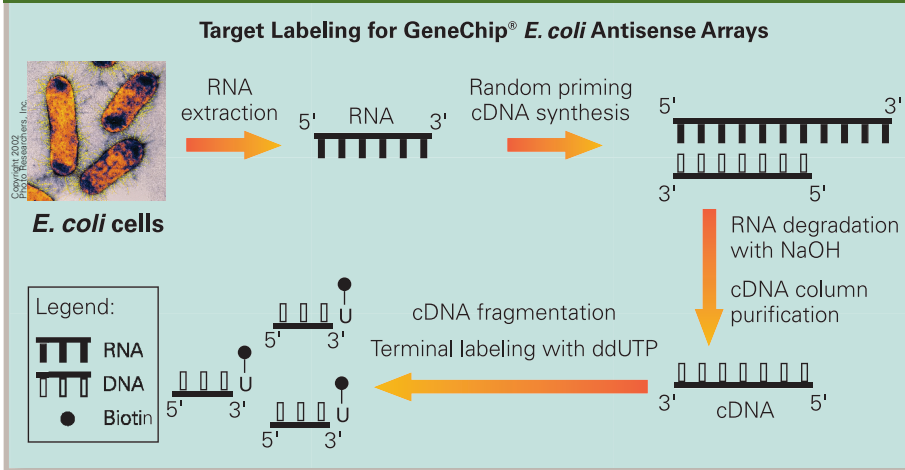
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## Specifications

<b>Number of Arrays</b>	1
<b>Array Format</b>	Standard
<b>Feature Size</b>	24 micron
<b>Oligo Length</b>	25-mer
<b>Probe Pairs/Gene</b>	~15
<b>Control Sequences includes:</b>	Poly-A: <i>B. subtilis</i> genes <i>lysA</i> , <i>pheB</i> , <i>thrCB</i> , <i>dapB</i> , <i>jojFG</i>
	Hybridization: HXB-2(HIV2), and Phage P1 <i>cre</i>
<b>Detection Sensitivity</b>	~1 copy/cell*

\*Expected performance based on the detection of unlabeled controls spiked into total RNA and carried through the cDNA labeling protocol. Assumptions are that each *E. coli* cell contains 100 fg total RNA, and mRNA accounts for approximately 2% of total RNA.

## Random-primed cDNA synthesis and end labeling method for prokaryotic samples.



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## Ordering Information

### GeneChip® *E. coli* Antisense Genome Array

GeneChip® *E. coli* Antisense Genome Array

**900381** Contains 5 GeneChip® *E. coli*  
 Antisense Genome Arrays

**900382** Contains 30 GeneChip® *E. coli*  
 Antisense Genome Arrays

### To Order

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