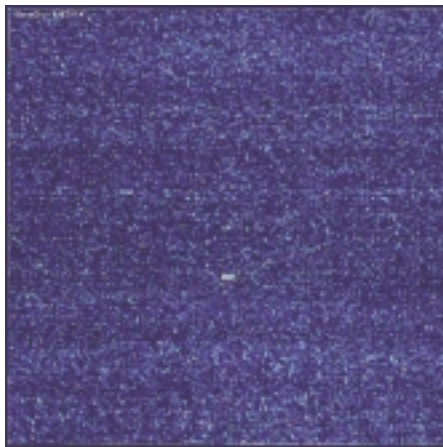




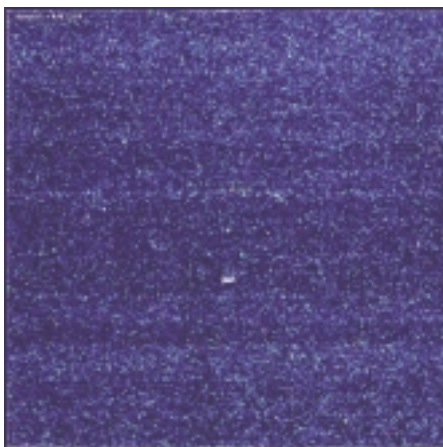
# Data Sheet

## GeneChip® Rat Expression Set 230

The GeneChip® Rat Expression Set 230 (Rat 230) is a powerful tool for toxicology, neurobiology, and other biological applications using rat as a model organism.



**Figure 1.** Rat 230A GeneChip probe array image (.DAT file).



**Figure 2.** Rat 230B GeneChip probe array image (.DAT file).

### Comprehensive Coverage of the Transcribed Rat Genome

- Two array set provides comprehensive coverage of the transcribed rat genome
- Incorporates data from over 30,200 transcripts and variants, including over 28,000 well substantiated rat genes
- Comprised of more than 31,000 probe sets and 681,012 distinct oligonucleotide features
- The publicly available draft of the rat genome and leading public rat databases were used to refine sequences and provide a higher quality of data output
- Sophisticated bioinformatics tools available through the NetAffx™ Analysis Center to decrease the time to biologically meaningful results

### Array Profile

Sequences used in the design of the array were selected from GenBank®, dbEST, and RefSeq. The sequence clusters were created from the UniGene database (Build 99, June 2002) and then refined by analysis and comparison with the publicly available draft assembly of the rat genome from the Baylor College of Medicine Human Genome Sequencing Center (June 2002). The GeneChip Rat Expression Array 230A includes representation of the RefSeq database sequences and probe sets related to sequences previously represented on the GeneChip Rat Genome U34A Array. The GeneChip Rat Expression Array 230B contains probe sets from refined EST clusters.

Oligonucleotide probes complementary to each corresponding sequence are synthesized *in situ* on the arrays. Eleven pairs of oligonucleotide probes are used to measure the level of transcription of each sequence represented on the GeneChip Rat Expression Set 230.

### Normalization Controls<sup>1</sup>

The Rat Set 230 includes a set of rat maintenance genes to facilitate the normalization and scaling of array experiments. This set of genes is represented on both arrays, and serves as a tool to normalize or scale your data prior to performing data comparison. These normalization genes show consistent levels of expression over defined sample sets.

### Relationship to GeneChip Rat Genome U34 Set

Most sequences previously represented on the GeneChip Rat Genome U34A Array are represented on the GeneChip Rat Expression Array 230A. Due to the dynamic nature of public databases, probe sets for these sequences will not be identical, and in some cases will be represented by a completely new probe set. As a result, data generated with different versions of the rat arrays may not always produce concordant results.

### RELATED PUBLICATIONS

Fischer, M. D. *et al.* Expression profiling reveals metabolic and structural components of extraocular muscles. *Physiol Genomics* 9(2): 71-84 (2002).

Flamez, Daisy *et al.* Critical Role for Cataplerosis via Citrate in Glucose-Regulated Insulin Release. *Diabetes* 51(7): 2018-2024 (July, 2002).

Grundschober, C. *et al.* Neurosecretion competence: A comprehensive gene expression program identified in PC12 cells. *Bio Chem* (2002).

<sup>1</sup>Affymetrix would like to acknowledge Gene Logic Inc. as the source of information that led Affymetrix to the determination of algorithm used in the selection of the genes included in the Normalization Control Set.

## Critical Specifications

Number of arrays in set	Two
Number of transcripts	30,248
Number of genes	28,757
Number of probe sets	31,042
Feature size	18 µm
Oligonucleotide probe length	25-mer
Probe pairs/sequence	11
Control sequences included:	
Hybridization controls:	<i>bioB, bioC, bioD, and cre</i>
Poly-A controls:	<i>dap, lys, phe, and thr</i>
Normalization control set:	100 probe sets represented on both A and B arrays
Housekeeping/Control genes:	GAPDH, beta-Actin, hexokinase 1
Detection sensitivity	1:100,000*

\*As measured by detection of pre-labeled transcripts derived from mouse cDNA clones in a complex rat background.

## Ordering Information

### Rat Expression Set 230

GeneChip® Rat Expression Set 230

**900408** Contains 5 Rat 230A and 5 Rat 230B Arrays

**900442** Contains 30 Rat 230A and 30 Rat 230B Arrays

GeneChip® Rat Expression Array 230A

**900404** Contains 5 Rat 230A Arrays

**900405** Contains 30 Rat 230A Arrays

GeneChip® Rat Expression Array 230B

**900406** Contains 5 Rat 230B Arrays

**900407** Contains 30 Rat 230B Arrays

## Supporting Products

Part Number	Product Name	Description
900182	Enzo® BioArray™ HighYield™ Transcript Labeling Kit	Sufficient for 10 reactions
900299	Eukaryotic Hybridization Control Kit	Sufficient for 30 reactions
900371	GeneChip® Sample Cleanup Module	Sufficient for 30 reactions
900375	T7-Oligo(dT) Promoter Primer Kit	Sufficient for 150 reactions

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

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