



Data Sheet

GeneChip® *Xenopus laevis* Genome Array

The GeneChip® *Xenopus laevis* Genome Array is a key research tool for the study of developmental biology. The array contains probe sets to over 14,400 *Xenopus laevis* transcripts and was developed in consultation with a public consortium of *Xenopus* researchers, Affymetrix array designers, and the National Institutes of Health. The GeneChip *Xenopus laevis* Genome Array includes comprehensive coverage of the transcript sequence data present in the *Xenopus laevis* UniGene Build 36, offering many opportunities to study genes involved in developmental biology as well as to discover novel transcripts.

Applications

Xenopus laevis is one of the few species of frogs that can be induced to lay eggs on command, which led to its popularity as a model organism for cell development and biology. Additionally, embryos develop very rapidly after fertilization — a tadpole with a fully functional set of organs forms within a couple of days. This rapid ontogeny enables biologists to manipulate an embryo and investigate the effect in a tadpole a few days later.

The GeneChip® *Xenopus laevis* Genome Array provides scientists with the genetic and molecular information to better understand the pathways and mechanisms of action behind the biological changes they observe in their experiments. This expression array is a comprehensive genomic tool for *Xenopus* gene expression studies.

Array Profile

Sequence information for the GeneChip *Xenopus laevis* Genome Array can be used to study gene expression of over 14,400 *Xenopus laevis* transcripts. Sequence information for this array was selected from the following public data sources: GenBank® (release 135.0, April 2003), dbEST (June 2003), and UniGene (build 36, June 2003). Probe sets on the array were designed with 16 oligonucleotide pairs to detect each transcript.

The array was designed in collaboration with representative members of the *Xenopus* community and the National Institutes of Health. More information on the design of this array can be found at www.xenbase.org.

Note: The DsRed probe set is provided with permission from BD Biosciences, and BD Biosciences grants users a limited license to utilize this probe set only on the Affymetrix array. Other uses of the probe set, or other DsRed sequence, require a license from BD Biosciences.

Critical Specifications

Number of arrays in set	One
Number of transcripts	~14,400
Number of probe sets	15,503
Feature size	18 µm
Oligonucleotide probe length	25-mer
Probe pairs/sequence	16
Control sequences included:	
Hybridization controls:	<i>bioB</i> , <i>bioC</i> , <i>bioD</i> , and <i>cre</i>
Poly-A controls:	<i>dap</i> , <i>lys</i> , <i>phe</i> , and <i>thr</i>
Housekeeping/Control genes:	alpha 1 Actin, alpha 3 Actin, beta Actin, GADPH
Detection sensitivity	1:100,000*

*As measured by detection in comparative analysis between a complex target containing spiked control transcriptions and a complex target with no spikes.

Supporting Products

Part Number	Product Name	Description
900301	Control Oligo B2, 3nM	Sufficient for 30 reactions
900433	Eukaryotic Poly-A RNA Control Kit	Approximately 100 reactions
900454	Eukaryotic Hybridization Control Kit	Sufficient for 30 reactions
900457	Eukaryotic Hybridization Control Kit	Sufficient for 150 reactions
900449	GeneChip® Expression 3'-Amplification Reagents for IVT Labeling	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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Ordering Information

GeneChip® *Xenopus laevis* Genome Array

GeneChip® *Xenopus laevis* Genome Array

900491 *Contains 5 Arrays*

900492 *Contains 30 Arrays*



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