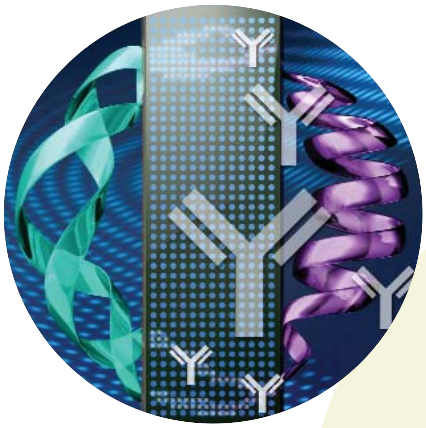
GENOMICS INFORMATICS PROTEOMICS METABOLOMICS

ATCTGATCCTTCTGAACGGAACTAATTTCAA
GAATCTGATCCTTGAACTACCTTCCAAGGTG

Human Promoter Arrays

Agilent ChIP-on-Chip Set



Agilent's novel and powerful method of location analysis of DNA binding proteins pairs chromatin immunoprecipitation (ChIP) with Agilent DNA microarrays to allow the construction of comprehensive DNA-protein binding profiles. This oligonucleotide microarray enables you to use ChIP-on-chip technology to gain broad insight into the mechanisms of human gene regulation on a genome-wide scale.

Features and Benefits at a Glance

Probes provide coverage for ~17,000 of the best defined human transcripts (as defined by RefSeq) and cover –5.5 KB upstream to +2.5 KB downstream from the transcriptional start sites for our promoter arrays.

Superior Microarray Performance

Proprietary microarray technology using optimized 60-mer oligonucleotide probes and a convenient two-color labeling system delivers higher sensitivity, accuracy, and greater reproducibility than one-color systems. These unique features allow sensitive measurements of weak- and infrequent-binding events, as well as direct comparisons of samples on the same microarray.

Reliable Binding Data

Powerful algorithms employ neighborhood probe voting with multiple probes to generate reliable data with greater true binding events and fewer false positives.

Agilent SurePrint Technology

Printed using Agilent's SurePrint technology that features a flexible, industrial-scale inkjet printing process that synthesizes oligonucleotide probes *in situ* onto 1" x 3" slides. Our technology provides a means to consistent, reliable, and affordable microarray products.

Access to Probe Sequence and Annotation

Complete access to public databases, probe sequences, and annotation files for convenient extraction of biological information.

Compatible with Easy-to-Use Data Analysis Software

ChIP Analytics software combines annotated, algorithmic array data processing with an easily manipulated text file output and high-speed statistical modeling functions.

Specifications

	Human Promoter Set
Product number	G4489A
Slides/set	2
Minimum order	5 sets (10 slides)
Microarrays/slide	1
Design ID numbers	014706, 014707
Microarray format	244K
Probe length	60 bases
Probes/Transcript	~25 probes
Probe coverage	~17,000 of the best defined human transcripts and cover –5.5 KB upstream to +2.5 KB downstream from the transcriptional start sites
Agilent internal quality control probes	~5000
Sequence source	UCSC hg17/NCBI release 35 (May 2004 build)
Feature size	65 µm
Starting sample input	0.5×10^7–1×10^8 cells
DNA required for labeling	2 µg
Type of labeling	Random priming using Klenow with Cyanine 3 and Cyanine 5 nucleotides
DNA required for hybridization	5 µg per channel
Hybridization volume	500 µL

The Agilent Probe Advantage

Unlike other companies, Agilent provides optimized and validated probe design that delivers the high signal-to-noise ratios that are essential for the success of ChIP-on-chip experiments. We carefully design our probes using stringent criteria.*

- 60-mer oligonucleotide probes provide robust hybridization, critical for the sensitivity and specificity that ChIP-on-chip demands.
- Average probe spacing parameters have been specifically optimized for the ChIP method as compared to other microarray applications.
- Repeat regions are masked to significantly reduce nonspecific noise.

*Probes are designed with criteria including optimal T_m, unique sequence, and self-structure prediction.

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