



Metro Center for High Technology Bldg.
2727 Second Ave. Suite 4113
Detroit, MI 48201
Phone: (313) 961-1606; Fax: (313) 963-7130
Email: info@DetroitRandD.com
Web: www.DetroitRandD.com

Drug-metabolizing Enzyme Antibody Microarray kit

Each chip was produced by quadruple spotting of 0.1, 0.3, 0.5 & 1.0 mg/ml antibodies

Cat# ABD 1: Antibody microarray analysis kit for drug-metabolizing enzymes (P450, GSTs, etc): \$550/kit

This kit is for determination of xenobiotic-induced protein expression of drug-metabolizing enzymes. This chip also contains antibodies for apoptosis-, protein degradation- and oxidative stress-related proteins.

Each kit contains a chip, spin columns to clean Cy3 - or Cy5-conjugated proteins, blocking buffer, hybridization buffer, non-specific binding prevention agents and an instruction booklet. Internal control proteins to monitor Cy3 and Cy5 conjugation and hybridization efficiency are also included. Cy3 and Cy5 conjugation kit is not included.

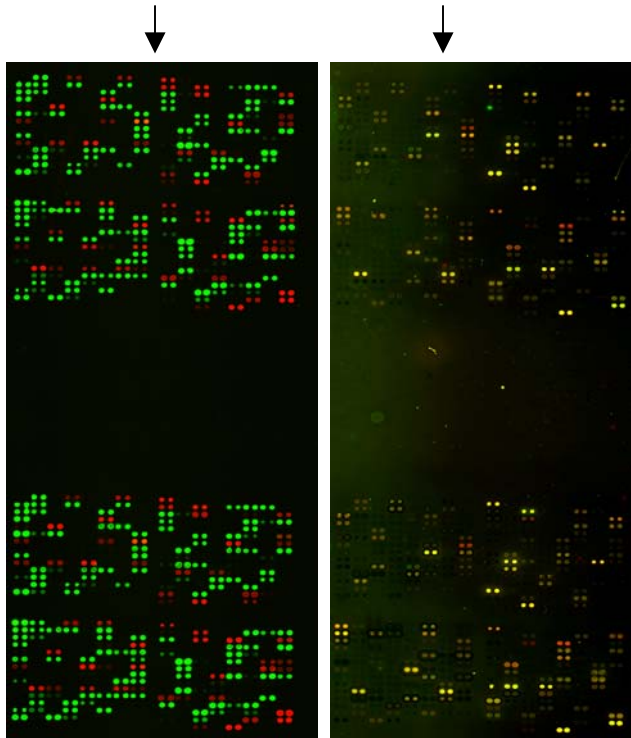
Cat# ABD 11: 2X Antibody microarray analysis kit: 2X \$475/kit (5% Discount) = \$1,045

Cat# ABD 21: 5X Antibody microarray analysis kit: 5X \$450/kit (10% Discount) = \$2,475

Cat# ABD 31: 10X Antibody microarray analysis kit: 10X \$425/kit (15% Discount) = \$4,675

Quality Control
Cy3(green): Anti-Rabbit
Cy5(red): Anti-Mouse

Experiment
Control
Rat Liver
after PB Treatment





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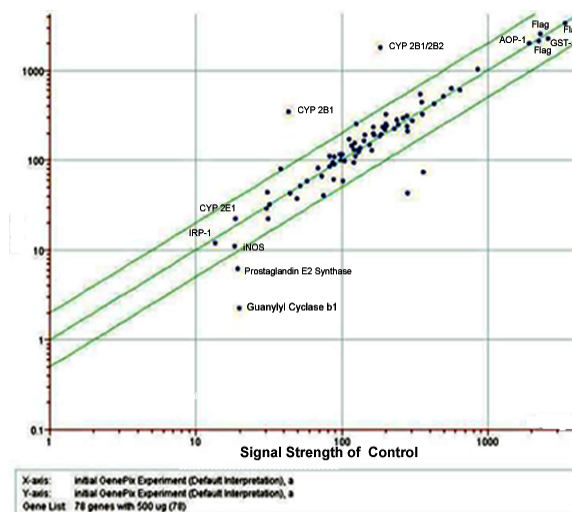
Drug Metabolism Antibody Microarray (Rat) for Pre-Clinical Drug Candidates Screening

Gene expression has been analyzed by throughput DNA microarrays. However, mRNA expression of a gene may not correlate with protein expression because of the differences in rates of mRNA translation/degradation and post-translational modification. Detroit R&D developed a targeted array with antibodies involved with drug metabolism which will be an invaluable tool for toxicoproteomics. Two different concentrations of antibodies are spotted in duplicate in each block. Each chip contained top and bottom duplicate blocks (thus, 8 spots for an antibody are spotted on a slide).

Antibodies Spotted for Microarray

Cytochrome P450 (CYP)	
Phase I Drug-Metabolizing Enzyme:	~15
Co-enzyme for CYP activity:	2
Additional Phase I drug metabolizing enzyme:	1
Mitochondrial protein:	4
Apoptosis-related protein:	~10
Intracellular protein degradation protein:	2
Phase II drug metabolizing enzyme:	7
Anti-oxidant protein:	2
Oxidative stress protein:	~20
House keeping protein:	4
Internal control for signal normalization:	1
Total:	~70

Signal Strength of PB-treated Samples



An Example of Utility of Rat Antibody Microarray: Control and phenobarbital (PB)-treated proteins were labeled with both Cy-3 and Cy-5 for fluorescence swaps. After hybridization of the proteins in the non-denaturing condition, imaging and data mining of the arrays were carried out and the results obtained by microarray analyses were verified by Western blot analyses. Twelve up-regulated (higher than 2-fold) proteins included CYP2B1/2B2, a known inducible protein after PB treatment.

**Thus, this antibody microarray is an excellent tool
 for a throughput ADME assay for drug development
 or bed-side patient monitoring**

Patent Status: US Patent Pending