

## **Human Drug Metabolism PCR Array**

**Drug Transporters:**

Metallothioneins: MT2A, MT3.

P-Glycoprotein family: ABCB1 (MDR1), ABCC1 (MRP1), GPI.

**Phase I Metabolizing Enzymes**: CYP11B2, CYP17A1, CYP19A1, CYP1A1, CYP2B6, CYP2C19, CYP2C8, CYP2C9, CYP2D6, CYP2E1, CYP2F1, CYP2J2, CYP3A4, CYP3A5.

**Phase II Metabolizing Enzymes:**

Carboxylesterases: CES1, CES2, CES3.

Decarboxylases: GAD1, GAD2.

Dehydrogenases: ADH1B, ADH1C, ADH4, ADH5, ADH6, ALAD, ALDH1A1, HSD17B1, HSD17B2, HSD17B3.

Glutathione Peroxidases: GPX1, GPX2, GPX3, GPX4, GPX5, GSTA3, GSTA4, GSTM2, GSTM3, GSTM5, GSTP1, GSTT1, GSTZ1, LPO, MPO.

Lipoxygenases: ALOX12, ALOX15, ALOX5, APOE.

Hydrolases: ASNA1, EPHX1, FAAH, FBP1.

Kinases: HK2, PKLR, PKM2.

Oxidoreductases: ABP1, BLVRA, BLVRB, CYB5R3 (DIA1), GPX1, GPX2, GSR, MTHFR, NOS3 (eNOS), NQO1, SRD5A1, SRD5A2.

Paraoxonases: PON1, PON2, PON3.

Glutathione S-Transferases: GSTA3, GSTA4, GSTM2, GSTM3, GSTM5, GSTP1, GSTT1, MGST1, MGST2, MGST3.

Other Transferases: CHST1, NAT1, NAT2, COMT.

**Other Genes**: AHR, ARNT, GCKR, SNN.