

## Sacchromosomes - Human Cytochrome P450s in a Yeast Expression System.

# Human CYP1B1 + P450 Reductase

### **Product overview**

Catalogue Number CYP1B1-1      Lot Number 1B1-10-07

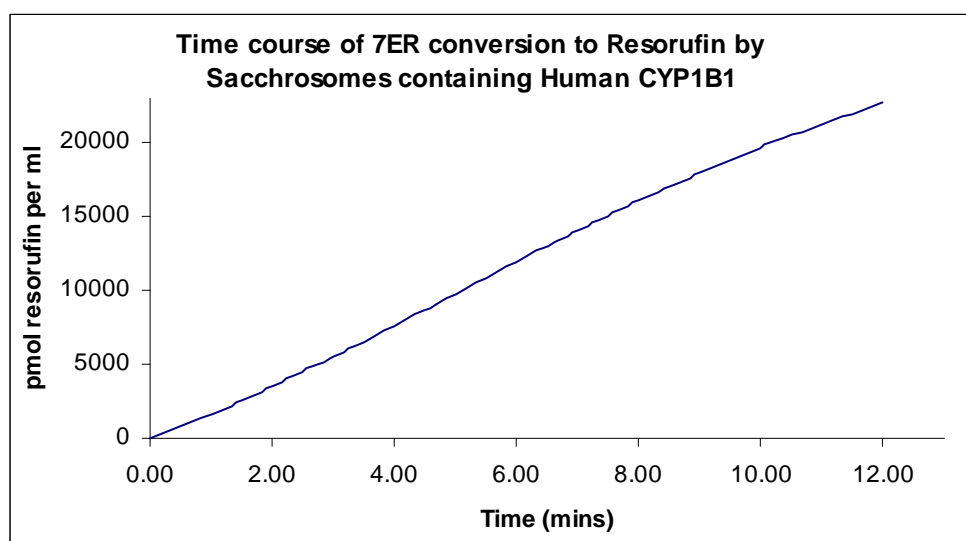
Human CYP1B1 is implicated in the metabolism of Polycyclic Aromatic hydrocarbons and can activate many structurally diverse environmental and dietary pro-carcinogens.

Membranes consist of Human Cytochrome P450 1B1 and P450 Reductase enzymes bound within a yeast microsomal fraction.

### **Product Data**

Pack Size	0.5 nmol
Volume per tube	0.5 ml
Cytochrome P450 Content	65.7 pmol.mg <sup>-1</sup>
Protein Concentration	15.2 mg.ml <sup>-1</sup>
Specific Activity	132.2 pmol Resorufin.min <sup>-1</sup> . pmol P450 <sup>-1</sup>
Cytochrome P450 Reductase Activity	754 nmol MTT reduced.min <sup>-1</sup> .mg protein <sup>-1</sup>

**Fluorometric assay of CYP1B1- Graph depicts product formation (Resorufin) in pmol over time in min.**



### **Specific Activity**

CYP1B1 activity assay performed in a microplate-based fluorometric assay with 7-ethoxyresorufin as a substrate in 0.1 M phosphate buffer (pH 7.4). Excitation at 530nm and Emission at 590nm, temperature held at 37°C.

0.1 ml of reaction mix contains 1.3mM NADP<sup>+</sup>, 3.3 mM Glucose-6-phosphate, 3.3 mM Magnesium Chloride, 0.04U of Glucose-6-phosphate dehydrogenase and 5 µM of 7-ethoxyresorufin. 1.5 pM of Sacchrosome 1B1 is added per reaction.

The conversion of substrate 7-ethoxyresorufin to product resorufin is measured over time. Values converted using a standard curve of resorufin.

### **Cytochrome P450 Content**

CO binding assay performed in a cuvette format using a dual beam spectrophotometer scanning from 500 to 400nm. Spectral difference of microsomes measured in a phosphate glycerol buffer with the addition of sodium dithionite with and without CO perfusion.

### **Cytochrome P450 Reductase Activity**

Reduction of MTT by Cytochrome P450 Reductase utilising a regenerating system in a phosphate buffer was measured over time.

### **Protein Concentration**

Total protein was measured using a microplate-based Bradford assay method with BSA as a standard.

### **Product Use**

For best stability thaw on ice, aliquot suitable quantities for your studies and store at -80°C.

Microsomes are supplied in a buffer containing Water, Tris, EDTA and Glycerol which are unlikely to interfere with most assays.

Studies indicate product stability at -80°C for at least 12 months.

### **Safety**

This product is not suspected to contain any pathogenic or hazardous materials. However, since these properties have not been investigated handle with care in accordance to your normal laboratory practices.

This product is only intended for *in vitro* research use and is not licensed as a drug, therapeutic or diagnostic tool for humans or animals.

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