CREATIVE BIOMART®
Assay Kit

# PTP1B drug discovery Kit

## Product Information

**Cat.No.** Kit-0750

**Product Overview**

The PTP1B Tyrosine Phosphatase Drug Discovery Kit is a colorimetric, non-radioactive assay designed to measure the phosphatase activity of purified PTP1B. This 96-well assay is useful for screening inhibitors and modulators of PTP1B activity.The kit includes human, recombinant PTP1B (residues 1-322; MW=37.4 kDa), expressed in E. coli. The detection of free phosphate released is based on the classic Malachite green assay and offers the advantages of convenient, 1-step detection and excellent sensitivity, without radioactivity.

**Size**

96 wells

**Description**

PTP1B (protein tyrosine phosphatase-1B) is a ubiquitous, nontransmembrane protein tyrosine phosphatase, originally identified in human placenta. It is implicated in the negative regulation of insulin receptor signaling, and is a potential therapeutic target for treatment of type 2 diabetes and obesity. The phosphopeptide substrate supplied with this kit contains sequence from the insulin receptor β subunit domain that must be autophosphorylated to achieve full receptor kinase activation. This "activation loop" is the target of several protein phosphatase regulators of insulin signaling, including, notably, PTP1B. The PTP1B inhibitor suramin is supplied as a control for inhibitor detection. Suramin is a reversible and competitive inhibitor of PTP1B, with a Ki of 5.5 µM.

**Applications**

Colorimetric detection, HTS

**Storage**

-80°C

**Kit Components**

PTP 1B Enzyme, Substrate ("IR5" Insulin Receptor β, residues 1142-1153, pY1146), Assay Buffer,

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Biomol Red Concentrated Phosphate Detection Reagent, Suramin (PTP1B inhibitor), Phosphate Standard, and Microplate (½-volume)

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