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## Product Data Sheet

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Product Name: GPBB Human  
Cat. No.: GP21713  
Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Glycogen phosphorylase brain form; EC 2.4.1.1; GPBB; MGC9213; PYGB.		
Formulation	Each mg of protein contains 50% glycerol.		

### Introduction

Glycogen phosphorylase is one of the phosphorylase enzymes (EC 2.4.1.1). It breaks up glycogen into glucose subunits. Glycogen is left with one less glucose molecule, and the free glucose molecule is in the form of glucose-1-phosphate. In order to be used for metabolism, it must be converted to glucose-6-phosphate by the enzyme phosphoglucomutase. Glycogen phosphorylase can only act on linear chains of glycogen (a 1-4 glycosidic linkage). Its work will immediately come to a halt four residues away from a 1-6 branch (which are exceedingly common in glycogen). In these situations, a debranching enzyme is necessary, which will straighten out the chain in that area. Additionally, an alpha 1-6 glucosidase enzyme is required to break the remaining 1-6 residue that remains in the new linear chain. After all this is done, glycogen phosphorylase can continue. An insulin-stimulated enzyme known as phosphoprotein phosphatase (PP-1) inactivates glycogen phosphorylase to prevent glycogen break up. GPBB - a sensitive marker for the AMI diagnosis within 4 hours after the onset of chest pain. It has also been shown that GPBB is increased in a considerable proportion of AMI patients within 2-3 hours from chest pain onset. GPBB is increased early in patients with unstable angina. GPBB can also be a sensitive marker for the detection of peri-operative myocardial ischaemia and infarction in patients undergoing coronary artery bypass grafting.

### Stability

GPBB although stable at 10°C for 7 days, should be stored below -18°C. Please prevent freeze-thaw cycles.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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### Background

Glycogen Phosphorylase Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain. The Human GPBB mature chain: 2 - 843 aa; that is a total of 842 aa having a molecular mass of 96695.96 Dalton. The theoretical pI is 6.40. The GPBB is purified by proprietary chromatographic techniques.

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