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## Product Data Sheet

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Product Name: PMM1 Human  
 Cat. No.: GP22104  
 Batch No.: 1

### Product Data

|                     |   |                    |                         |
|---------------------|---|--------------------|-------------------------|
| Purity              | >98%  | Source             | Escherichia Coli.       |
| Physical Appearance | solid   | Shipping Condition | Shipped with Ice Packs. |
| Synonyms            | Phosphomannomutase 1; PMM 1; PMMH-22; PMM1; PMMH22; Sec53.  |                    |                         |
| Amino Acid Sequence | MGSSHHHHHH SGLVPRGSH MAVTAQAARR KERVLCCLFDV DGTLTTPARQK<br>IDPEVAAFLQ KLRSRVQIGV VGGSDYCKIA EQLGDGDEVI EKFDYVFAEN<br>GTVQYKHGRL LSKQTIQ NHL GEELLQDLIN FCLSYMALLR LPKKRGTFIE<br>FRNGMLNISP IGRSCTLEER IEFSELDKKE KIREKFVEAL KTEFAGKGLR<br>FSRGGMISFD VFPEGWDKRY CLDSLQDSF DTIHFFGNET SPGGNDFEIF<br>ADPRTVGHSV VSPQDTVQRC REIFFPETAH EA. |                    |                         |
| Formulation         | The PMM1 solution (0.5mg/ml) contains 20mM Tris-HCl buffer (pH8.0), 10% glycerol, 2mM DTT, 100mM NaCl and 0.1mM PMSF.   |                    |                         |

### Introduction

Phosphomannomutase 1 (PMM1) is an enzyme involved in the synthesis of the GDP-mannose and dolichol-phosphate-mannose required for a number of critical mannosyl transfer reactions. PMM1 catalyzes the conversion between D-mannose 6-phosphate and D-mannose 1-phosphate which is a substrate for GDP-mannose synthesis. GDP-mannose is used for the synthesis of dolichol-phosphate-mannose, which is crucial for N-linked glycosylation and accordingly the secretion of several glycoproteins as well as for the synthesis of glycosyl-phosphatidyl-inositol (GPI) anchored proteins. Additionally, PMM1 may be responsible for the degradation of glucose-1,6-bisphosphate in ischemic brain.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

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

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PMM1 Human Recombinant fused with a 20 amino acid His tag at N-terminus produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 282 amino acids (1-262 a.a.) and having a molecular mass of 31.9kDa. The PMM1 is purified by proprietary chromatographic techniques.

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