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# Recombinant E.coli Beta-galactosidase Protein

Catalog No. PKSQ050060

Note: Centrifuge before opening to ensure complete recovery of vial contents.

## Description

Synonyms Beta-galactosidase;Beta-gal;Lactase;lacZ

**Species** E.coli **Expression Host** E.coli

**Sequence** Met1-Lys1024(12-41AA deletion)

AccessionP00722Calculated Molecular Weight112.9 kDaObserved molecular weight115 kDaTagNone

**Bioactivity** Not validated for activity

### **Properties**

**Purity** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin** < 1.0 EU per µg of the protein as determined by the LAL method.

Storage Storage Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.

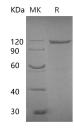
**Shipping** This product is provided as liquid. It is shipped at frozen temperature with blue

ice/gel packs. Upon receipt, store it immediately at < - 20°C.

**Formulation** Supplied as a 0.2 μm filtered solution of PBS, pH7.4.

**Reconstitution** Not Applicable

#### Data



> 95 % as determined by reducing SDS-PAGE.

### **Background**

 $\beta$ -galactosidase is an exoglycosidase which hydrolyzes the  $\beta$ -glycosidic bond formed between a galactose and its organic moiety. It may also cleave fucosides and arabinosides but with much lower efficiency.  $\beta$ -galactosides include carbohydrates containing galactose where the glycosidic bond lies above the galactose molecule. Substrates of different  $\beta$ -galactosidases include ganglioside GM1, lactosylceramides, lactose, and various glycoproteins. It is an essential enzyme in the human body. Deficiencies in the protein can result in galactosialidosis or Morquio B syndrome. In E. coli, the gene of  $\beta$ -galactosidase, the lacZ gene, is present as part of the inducible system lac operon which is activated in the presence of

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lactose when glucose level is low.  $\beta$ -galactosidase is important for organisms as it is a key provider in the production of energy and a source of carbons through the break down of lactose to galactose and glucose.

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