

## Beta-galactosidase/GLB1 Protein, Human (HEK293, His)

<b>Cat. No.:</b>	HY-P70303
<b>Synonyms:</b>	rHuBeta-galactosidase/GLB1, His; Beta-Galactosidase; Acid Beta-Galactosidase; Lactase; Elastin Receptor 1; GLB1; ELNR1
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	P16278 (L24-V677)
<b>Gene ID:</b>	2720
<b>Molecular Weight:</b>	Approximately 90.0 kDa

### PROPERTIES

#### AA Sequence

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LRNATQRMFE   IDYSRDSFLK   DGQPFRYISG   SIHYSRVPRF
YWKDRLLKMK   MAGLNAIQTY   VPWNFHEPWP   GQYQFSEDHD
VEYFLRLAHE   LGLLVILRPG   PYICAEWEMG   GLPAWLLLEKE
SILLRSSDPD   YLAAVDKWLG   VLLPKMKPLL   YQNGGPVITV
QVENEYGSYF   ACDFDYLRFL   QKRFRHHLGD   DVVLFFTDGA
HKTFLKCGAL   QGLYTTVDFG   TGSNITDAFL   SQRKCEPKGP
LINSEFYTGW   LDHWGQPHST   IKTEAVASSL   YDILARGASV
NLYMFIGGTN   FAYWNGANSP   YAAQPTSVDY   DAPLSEAGDL
TEKYFALRNI   IQKFEKVPEG   PIPPSTPKFA   YGKVTLEKLK
TVGAALDILC   PSGPIKSLYP   LTFIQVKQHY   GFVLYRTTLP
QDCSNPAPLS   SPLNGVHDRA   YVAVDGIPQG   VLERNNVITL
NITGKAGATL   DLLVENMGRV   NYGAYINDFK   GLVSNLTLSS
NILTDWTIFP   LDTEDAVRSH   LGGWGHRRDSG   HHDEAWAHNS
SNYTLPAFYM   GNFSIPSGIP   DLPQDTFIQF   PGWTKGQVWI
NGFNLGRYWP   ARGPQLTLFV   PQHILMTSAP   NTITVLELEW
APCSSDDPEL   CAVTFVDRPV   IGSSVTYDHP   SKPVEKRLMP
PPPQKNKDSW   LDHV
  
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**Biological Activity** Measured by its ability to cleave a fluorogenic substrate, 4-Methylumbelliferyl-beta-D-galactopyranoside. The specific activity is 1151.98 pmol/min/μg, as measured under the described conditions.

**Appearance** Solution

**Formulation** Supplied as a 0.2 μm filtered solution of 20 mM Tris-HCl, 150 mM NaCl, pH 8.0.

**Endotoxin Level** <1 EU/μg, determined by LAL method.

**Reconstitution** N/A

**Storage & Stability** Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.

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**Shipping**

Shipping with dry ice

**DESCRIPTION****Background**

The Beta-galactosidase (GLB1) protein functions as an enzyme that cleaves beta-linked terminal galactosyl residues from various substrates, including gangliosides, glycoproteins, and glycosaminoglycans. Despite lacking direct beta-galactosidase catalytic activity, GLB1 plays essential functional roles in elastogenesis, contributing to the formation of extracellular elastic fibers and the development of connective tissue. Intriguingly, GLB1 is identified as the elastin-binding protein (EBP), a crucial component of the non-integrin cell surface receptor found on fibroblasts, smooth muscle cells, chondroblasts, leukocytes, and certain cancer cell types. In elastin-producing cells, GLB1 associates with tropoelastin intracellularly, serving as a recycling molecular chaperone that facilitates the secretion of tropoelastin and supports its assembly into elastic fibers. This multifaceted functionality positions GLB1 as a key player in both enzymatic processes and structural roles related to tissue development and maintenance.

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

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