

BLMH Protein, Mouse, Recombinant (His)

General Information

Synonyms:	Bh;bleomycin hydrolase;Bmh;AI035728
Protein Construction:	A DNA sequence encoding the mouse BLMH (NP_848760.1) (Asn 2-Glu 455) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	Mouse
Expression Host:	E. coli
Accession:	Q8R016
Molecular Weight:	53.3 kDa (predicted); 47 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured by its ability to hydrolyze Met-AMC. The specific activity is >500 pmoles/min/μg.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris, 0.15M NaCl, 10% glycerol, pH 8.0. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

The papain superfamily member bleomycin hydrolase (BLMH) is a cytoplasmic cysteine peptidase that is highly conserved through evolution. The only known activity of the enzyme is metabolic inactivation of the glycopeptide bleomycin (BLM), an essential component of combination chemotherapy regimens for cancer. The papain superfamily member bleomycin hydrolase (BLMH) is a neutral cysteine protease with structural similarity to a 20S proteasome. Bleomycin (BLM), a clinically used glycopeptide anticancer agent. BLMH is an essential protectant

against BLM-induced death and has an important role in neonatal survival and in maintaining epidermal integrity. Sequencing revealed several putative sites phosphorylated by different types of protein kinases, but no signal sequence, transmembrane domain, N-linked glycosylation site or DNA-binding motif.

Reference

Takeda A, et al. (1996) Cloning and Analysis of cDNA Encoding Rat Bleomycin Hydrolase, a DNA-Binding Cysteine Protease. *J Biochem.* 120 (2): 353-9.

Lefterov IM, et al. (2000) Human bleomycin hydrolase regulates the secretion of amyloid precursor protein. *The FASEB Journal.* 14(12): 1837-47.

Brmme D, et al. (1996) Human Bleomycin Hydrolase: Molecular Cloning, Sequencing, Functional Expression, and Enzymatic Characterization. *Biochemistry.* 35 (21): 6706-14.

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