Data Sheet (Cat.No.TMPH-00711)

TargetMol

BioH Protein, E. coli, Recombinant (His & Myc)

General Information

Synonyms:	Biotin synthesis protein BioH;bioB;bioH;Pimeloyl-[acyl-carrier protein] methyl ester esterase; Carboxylesterase BioH
Protein Construction:	1-256 aa
Species:	E. coli
Expression Host:	E. coli
Accession:	P13001
Molecular Weight:	35.9 kDa (predicted)
AA Sequence:	MNNIWWQTKGQGNVHLVLLHGWGLNAEVWRCIDEELSSHFTLHLVDLPGFGRSRGFGALSLADMAEAVLQ QAPDKAIWLGWSLGGLVASQIALTHPERVQALVTVASSPCFSARDEWPGIKPDVLAGFQQQLSDDFQRTVER FLALQTMGTETARQDARALKKTVLALPMPEVDVLNGGLEILKTVDLRQPLQNVSMPFLRLYGYLDGLVPRKVV PMLDKLWPHSESYIFAKAAHAPFISHPAEFCHLLVALKQRV

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/mL. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

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 physiological role of BioH is to remove the methyl group introduced by BioC when the pimeloyl moiety is complete. It allows to synthesize pimeloyl-ACP via the fatty acid synthetic pathway through the hydrolysis of the ester bonds of pimeloyl-ACP esters. E.coli employs a methylation and demethylation strategy to allow elongation of a temporarily disguised malonate moiety to a pimelate moiety by the fatty acid synthetic enzymes. BioH shows a preference for short chain fatty acid esters (acyl chain length of up to 6 carbons) and short chain p-nitrophenyl esters. Also displays a weak thioesterase activity. Can form a complex with CoA, and may be involved in the condensation of CoA and pimelic acid into pimeloyl-CoA, a precursor in biotin biosynthesis.; Catalyzes the hydrolysis of the methyl ester bond of dimethylbutyryl-S-methyl mercaptopropionate (DMB-S-MMP) to yield dimethylbutyryl mercaptopropionic acid (DMBS-MPA) during the biocatalytic conversion of simvastin acid from monacolin J acid. Can also use acyl carriers such as dimethylbutyryl-S-ethyl mercaptopropionate (DMB-S-EMP) and dimethylbutyryl-S-methyl thioglycolate (DMB-S-MTG) as the thioester substrates.

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