Data Sheet (Cat.No.TMPJ-01440)

TargetMol

Cutinase Protein, Thermobifida fusca, Recombinant (His)

General Information

Synonyms: Cutinase

Protein Construction: Ala1-Phe261

Species: Thermobifida fusca

Expression Host: E. coli

Accession: E5BBQ3

Molecular Weight: 28-30 KDa (reducing condition)

AA Sequence: Ala1-Phe261

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: Greater than 95% as determined by reducing SDS-PAGE. (QC verified)

Endotoxin: < 0.1 ng/μg (1 EU/μg) as determined by LAL test.

Formulation: Supplied as a 0.2 μm filtered solution of PBS, 50% Glycerol, pH 7.4.

Preparation and Storage

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:

Proteins are shipped with blue ice.

Protein Background

Cutinase belongs to the family of hydrolases, specifically those acting on carboxylic ester bonds. The systematic name of this enzyme class is cutin hydrolase. Cutinase is a serine esterase containing the classical Ser, His, Asp triad of serine hydrolases. The protein belongs to the alpha-beta class, with a central beta-sheet of 5 parallel strands covered by 5 helices on either side of the sheet. Cutin monomers released from the cuticle by small amounts of cutinase on fungal spore surfaces can greatly increase the amount of cutinase secreted by the spore. The active site cleft is partly covered by 2 thin bridges formed by amino acid side chains, by contrast with the hydrophobic lid possessed by other lipases. The protein also contains 2 disulfide bridges, which are essential for activity, their cleavage resulting in complete loss of enzymatic activity.

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