



Recombinant Protein Technical Manual  
Recombinant *Thermobifida fusca* Cutinase Protein  
(His Tag)  
RPES4100

### Product Data:

**Product SKU:** RPES4100

**Size:** 10µg

**Species:** *Thermobifida fusca*

**Expression host:** *E. coli*

**Uniprot:** E5BBQ3

### Protein Information:

**Molecular Mass:** 29.5 kDa

**AP Molecular Mass:** 28-30 kDa

**Tag:** C-His

**Bio-activity:**

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

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

**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. Upon receipt, store it immediately at < -20°C.

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

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** Cutinase

## Immunogen Information:

**Sequence:** Ala1-Phe261

## 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.