

# Recombinant Human Granzyme B/CTLA-1/GZMB Protein

Catalog No.: RP02860 **Recombinant**

## Sequence Information

| Species | Gene ID | Swiss Prot |
|---------|---------|------------|
| Human   | 3002    | P10144     |

### Tags

C-His

### Synonyms

C11; HLP; CCPI; CGL1; CSPB; SECT; CGL-1; CSP-B; CTLA1; CTSGL1;GZMB

## Product Information

| Source       | Purification                   |
|--------------|--------------------------------|
| HEK293 cells | >97% as determined by SDS-PAGE |

### Endotoxin

<1EU/μg

### Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Contact us for customized product form or formulation.

### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Contact

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## Background

Granzyme B, also known as GZMB, is the most prominent member of the granzyme family of cell death-inducing serine proteases expressed in the granules of cytotoxic T lymphocytes (CTLs) and NK cells. Granzyme B enters the target cells depending on another membrane-binding granule protein, perforin, results in the activation of effector caspases and mitochondrial depolarization through caspase-dependent and -independent pathways, and consequently induces rapid cell apoptosis. Over 3 substrates of GZMB have been identified including the key substrate caspase-3, ICAD, and Bid. GZMB is suggested to protect the host by lysing cells bearing on their surface 'nonself' antigens such as bacterial and viral infected-cells and tumor cells and accordingly plays an essential role in immunosurveillance.

## Basic Information

### Description

Recombinant Human Granzyme B Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Gly19-Tyr247) of human Granzyme B (Accession #NP\_004122.1) fused with a 6×His tag at the C-terminus.

### Bio-Activity

Measured by its ability to cleave a peptide substrate, tButyloxycarbonylAlaAlaAspThioBenzylester (BocAADSbzI), in the presence of 5,5'Dithiobis (2nitrobenzoic acid) (DTNB). The specific activity is >1500 pmol/min/μg. (The enzyme needs to be activated by Recombinant Mouse Active Cathepsin C)

### Storage

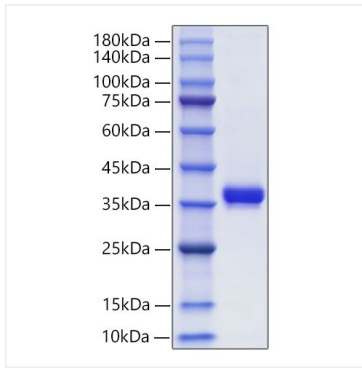
Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

## Validation Data

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Recombinant Bovine FSH/CGA&FSHB Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 35-40 kDa.