Recombinant Human Granzyme B/CTLA-1/GZMB Protein

Catalog No.: RP02860

Sequence Information

Species
Human

Gene ID
3002

Swiss Prot
P10144

Tags
C-His

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

Product Information

Source
HEK293 cells

Purification
≥ 95 % as determined by SDS-PAGE.

Calculated MW
26.57 kDa

Observed MW
35-40 kDa

Endotoxin
< 1 EU/μg of the protein by LAL method.

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 stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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.

Activity
Measured by its ability to cleave a peptide substrate, tButyloxycaronylAlaAlaAspThioBenzylester (BocAADSBzl),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)

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃

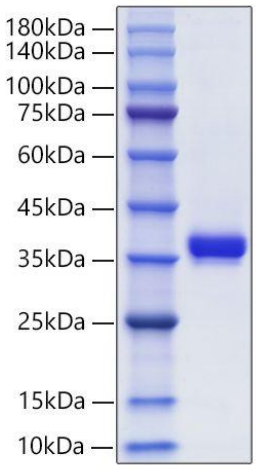
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

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Validation Data



Recombinant Human Granzyme B/CTLA-1/GZMB Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.

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