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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	≥ 95 % as determined by SDS-PAGE.

Calculated MW	Observed MW
26.57 kDa	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.

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, 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
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt.
After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.
Avoid repeated freeze/thaw cycles.

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

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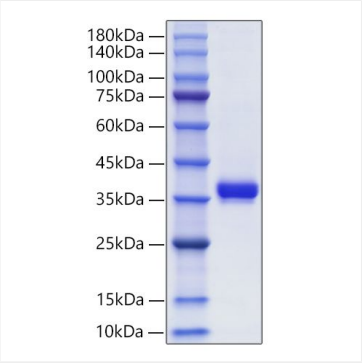
Validation Data



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

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