

Human Granzyme B / GZMB Protein (His Tag)



Sino Biological Inc.

Biological Solution Specialist

Catalog Number: 10345-H08H

General Information

Gene Name Synonym:

CCPI; CGL-1; CGL1; CSP-B; CSPB; CTLA1; CTSLG1; HLP; SECT; AI553453; CCP-1/C11; CCP1; Ctla-1; Ctla1; GZB

Protein Construction:

A DNA sequence encoding the proform of human Granzyme B (NP_004122.1) (Met 1-Tyr 247) was expressed with a C-terminal polyhistidine tag.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Gly 19

Molecular Mass:

The recombinant human Granzyme B consists of 240 amino acids and has a calculated molecular mass of 27 kDa. As a result of glycosylation, the apparent molecular mass of rhGranzyme B is approximately 36 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

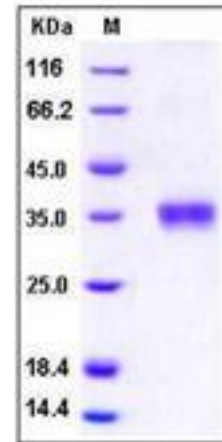
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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 30 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.

References

- 1.Schmid J., *et al.*,(1987), Induction of mRNA for a serine protease and a beta-thromboglobulin-like protein in mitogen-stimulated human leukocytes. J. Immunol. 139:250-256.
- 2.Caputo A., *et al.*, (1988), Structure and differential mechanisms of regulation of expression of a serine esterase gene in activated human T lymphocytes.J. Biol. Chem. 263:6363-6369.
- 3.Trapani J.A., *et al.*,(1988), Molecular cloning of an inducible serine esterase gene from human cytotoxic lymphocytes.Proc. Natl. Acad. Sci. U.S.A. 85:6924-6928.

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