10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Granzyme B
Catalog # PVGS1418

Specification

Granzyme B - Product Information

Primary Accession P04187
Species
Mouse

Sequence
Ile21-Ser247

Purity
> 98% as analyzed by SDS-PAGE

Endotoxin Level
< 0.2 EU/ µg of protein by gel clotting method

Expression System
CHO

Formulation **Lyophilized after extensive dialysis against PBS.**

Reconstitution
It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH_2O or PBS up to 100 µg/ml.

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Granzyme B - Additional Information

Gene ID 14939

Other Names
Granzyme B(G, H), 3.4.21.79, CTLA-1, Cytotoxic cell protease 1, CCP1, Fragmentin-2, Gzmb, Ctla-1, Ctla1

Target Background
Granzyme B is a serine protease most commonly found in the granules of cytotoxic lymphocytes (CTLs), natural killer cells (NK cells) and cytotoxic T cells. It is secreted by these cells along with the pore forming protein perforin to mediate apoptosis in target cells.Granzyme B has also recently been found to be produced by a wide range of non-cytotoxic cells ranging from basophils and mast cells to smooth muscle cells. The secondary functions of granzyme B are also numerous. Granzyme B has been shown to be involved in inducing inflammation by stimulating cytokine release and is also involved in extracellular matrix remodeling.

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Granzyme B - Protein Information

Name Gzmb

Synonyms Ctla-1, Ctla1

Function
Abundant protease in the cytosolic granules of cytotoxic T- cells and NK-cells which activates caspase-independent pyroptosis when delivered into the target cell through the immunological synapse (PubMed:35705808). It cleaves after Asp (PubMed:35705808). Once delivered into the target cell, acts by catalyzing cleavage of gasdermin-E (GSDME), releasing the pore-forming moiety of GSDME, thereby triggering pyroptosis and target cell death (By similarity). Seems to be linked to an activation cascade of caspases (aspartate- specific cysteine proteases) responsible for apoptosis execution (By similarity). Cleaves caspase-3 and -9 (CASP3 and CASP9, respectively) to give rise to active enzymes mediating apoptosis (PubMed:35705808). Cleaves and activates CASP7 in response to bacterial infection, promoting plasma membrane repair (PubMed:35705808).

Cellular Location
Secreted {ECO:0000250|UniProtKB:P10144}. Cytolytic granule {ECO:0000250|UniProtKB:P10144}. Note=Delivered into the target cell by perforin. {ECO:0000250|UniProtKB:P10144}

Granzyme B - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Granzyme B - Images