Datasheet for ABIN2666501

GZMB Protein (AA 19-249)

1 Image

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Overview

Quantity:	10 µg
Target:	GZMB
Protein Characteristics:	AA 19-249
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Application:	Intracellular Flow Cytometry (ICFC)

Product Details

Purity:	> 95 % , as determined by Coomassie stained SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 1.0 EU per µg of protein as determine by the LAL method.

Target Details

Target:	GZMB
Alternative Name:	Granzyme B (GZMB Products)
Background:	Granzyme B is a serine protease expressed by cytotoxic T cells (CTL) and NK cells. Its main function is to induce cell death to eliminate harmful targets such as allogeneic, virally infected, and tumorous cells. This is evident by the fact that CTLs from mice with inhibited granzyme B production exhibit a profound defect in inducing rapid DNA fragmentation and apoptosis in

Target Details

	target cells. Following receptor-mediated conjugate formation between CTL or NK and their target cell, granzyme B enters the target via endocytosis, and subsequently activates multiple protein substrates to induce apoptosis. Most circulating CD56+ CD8- NK cells, and approximately half of circulating CD8+ T cells, coexpress both granzyme A and B. In contrast, few circulating CD4+ T cells express granzymes A or B. Activation of CD8+ and CD4+ T lymphocytes induce substantial expression of granzyme B, but not granzyme A. Besides CTL and NK, evidence has shown that the distribution of human granzyme B has a broader spectrum of cells, including CD34+ hematopoietic progenitor cells, keratinocytes, basophils, mast cells, plasmacytoid dendritic cells, and B cells. Although its role in cytotoxic lymphocyte-mediated apoptosis is well established, granzyme B can also degrade extracellular matrix proteins and alter inflammation if present in the extracellular milieu. These findings suggest that granzyme B can function as an activation molecule with potentially important immunoregulatory functions. In addition, it was shown that expression of granzyme B is elevated in acute coronary syndrome and acute myocardia infarction, indicating that granzyme B could be a factor involved in cardiovascular diseases.
Molecular Weight:	This 244 amino acid recombinant protein has a predicted molecular mass of approximately 27.5 kDa. The protein migrates at about 37 kDa in DTT-reducing conditions and about 37 kDa in non-reducing conditions by SDS-PAGE.The predicted N-terminal amino acid i
Pathways:	Apoptosis, Caspase Cascade in Apoptosis

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Comment:	Biological activity: Human Granzyme B activated by mouse Cathepsin C is able to cleave the peptide substrate t-Butyloxycaronyl-Ala-Ala-Asp-ThioBenzyl ester (Boc-AAD-SBzl), in the presence of 5,5'Dithio-bis (2-nitrobenzoic acid) (DTNB), with an activity >1500 pmol/min/µg.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Reconstitution:	For maximum results, quick spin vial prior to opening.
Buffer:	0.22 µm filtered protein solution is in 20 mM Tris, 150 mM NaCl, pH 7.5.
Handling Advice:	Avoid repeated freeze/thaw cycles.

Handling

Storage:	-20 °C
Storage Comment:	Unopened vial can be stored at -70°C for six months.

Images

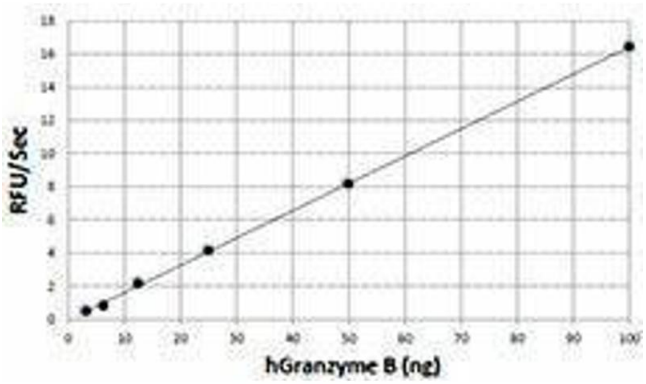

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Image 1.