

Granzyme H (GZMH) Active Protein | GZMH active protein

Active Granzyme H (GZMH)

CATALOG # AAA161935	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Granzyme H (GZMH); Active Granzyme H (GZMH); Granzyme H; CCP-X; CGL-2; CSP-C; CTLA1; CTSLG2; Cathepsin G-Like 2; Protein h-CCPX; Cytotoxic T-lymphocyte proteinase; Cytotoxic serine protease C4; GZMH active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 95% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Glu19~Leu2 46
Applicable Applications for GZMH active protein	Activity Assay, Cell Culture
Species	Human
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	9.9
Research Area	Enzyme & Kinase
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months

IMAGES

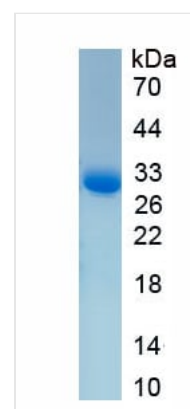
Specific Activity (pmol/min/ug)=

$$\frac{\text{Adjusted } V_{\max}^* (\text{OD}/\text{min}) \times \text{well volume (L)} \times 10^{12} \text{ pmol/mol}}{\text{ext. coeff}^{**} (\text{M}^{-1}\text{cm}^{-1}) \times \text{path corr.}^{***} (\text{cm}) \times \text{amount of enzyme (ug)}}$$

*Adjusted for Substrate Blank
**Using the extinction coefficient 13260 M⁻¹cm⁻¹
***Using the path correction 0.320 cm

Bioactivity

Granzyme H is a member of the granzyme family of serine proteases found specifically in the cytotoxic granules of cytotoxic T lymphocytes (CTL) and natural killer (NK) cells. Granzyme H's functions are largely unknown. The more abundant expression of Granzyme H than Granzyme B in NK cells suggests that Granzyme H may complement the pro-apoptotic function of Granzyme B in this cell type. Human Granzyme H is synthesized as a precursor (246 residues) with a signal peptide (residues 1-18), a propeptide (residues 19-20) and a mature chain (residues 21-246). The purified recombinant human Granzyme H consists of residues 19 to 246 which activity was measured by its ability to cleaves a thioester substrate Z-Lys-SBzl+HCl. The reaction was performed in 0.05 M Tris, 0.15 M NaCl, 0.01% Triton X-100, pH 8.0 (Assay Buffer), initiated by addition 50 uL of various concentrations of GZMH (diluted by Assay Buffer) to 50 uL of 1.2 mM Substrate and DTNB mixture. The final well serves as a negative control with no GZMH, replaced with 50 uL assay buffer. Incubated at 25 degree C for 5min, then read at a wavelength of 405 nm. The specific activity of recombinant human Granzyme H is >300 pmol/min/ug.



SDS-PAGE

Figure. SDS-PAGE

ADDITIONAL INFORMATION

Product Categories/Family for GZMH active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	15529990
NCBI GeneID	2999
NCBI Accession #	NP_219491.1
NCBI GenBank Nucleotide #	NM_033423.4
UniProt Accession #	P20718
Molecular Weight	27,315 Da
NCBI Official Full Name	granzyme H isoform 1
NCBI Official Synonym Full Names	granzyme H (cathepsin G-like 2, protein h-CCPX)
NCBI Official Symbol	GZMH
NCBI Official Synonym Symbols	CCP-X; CGL-2; CSP-C; CTLA1; CTSL2
NCBI Protein Information	granzyme H; cytotoxin serine protease-C; cytotoxic T-lymphocyte proteinase; cytotoxic T-lymphocyte-associated serine esterase 1
UniProt Protein Name	Granzyme H
UniProt Gene Name	GZMH
UniProt Synonym Gene Names	CGL2; CTSL2; CTSL2; CSP-C
UniProt Entry Name	GRAH_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/e-coli-active-protein/granzyme-h-gzmh/161935>