

Active Recombinant Mouse Granzyme D, His-tagged

Cat. No. Gzmd-1967M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Gzmd protein was expressed in Murine myeloma cell line. Ile21-Leu252, with a C-terminal 10-His tag.
Species	Mouse
Source	Mammalian Cells
Protein Length	21-252 a.a.
Description	Gzmd is a member of the granzyme family of the serine proteases found specifically in the cytotoxic granules of cytotoxic T lymphocytes (CTL) and natural killer (NK) cells. Gzmd's functions are largely unknown. However, its selective expression in primary and functional hematopoietic stromal lines correlates with capacity of supporting growth of a pre-T lymphoma clone. Together with Granzymes E, F and G, it is regulated through pregnancy and by IL-2 and IL-15 in granulated metrial gland cells. The human or rat counterpart of mouse Gzmd has not been found. Like other granzymes, mouse Gzmd is not secreted as a zymogen but stored as a fully processed and activated enzyme in the cytoplasmic granules of CTL. It is synthesized as a 252 amino acid precursor with an 18 amino acid signal peptide and a 2 amino acid propeptide. The mature protein (residues 21-252) is expressed and purified.
Form	Supplied as a 0.2 unfiltered solution in HEPES and NaCl.
N-terminal Sequence	Ile21 & His25

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MolecularWeight	27 kDa
Activity	Measured by its ability to cleave a peptide substrate, Succinyl-Phe-Leu-Phe-ThioBenzylester (Suc-FLF-SBzl), in the presence of 5, 5'-Dithiobis (2-nitrobenzoic acid)(DTNB). The specific activity is > 50 pmoles/min/μg, as measured under the described conditions.
Endotoxin Level	<1.0EU per 1μg of the protein by the LAL method.
SDS-PAGE	42 kDa, reducing conditions.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Reconstitution	Reconstitute at 100μg/mL in sterile 25 mM HEPES and 200 mM NaCl, pH 7.5.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, -20 to -70°C as supplied. 3 months, -20 to -70°C under sterile conditions after opening.

GENE INFORMATION

Gene Name	Gzmd granzyme D [Mus musculus]
Official Symbol	Gzmd
Synonyms	Gzmd; granzyme D; CCP5; Ctla5; Ctla-5
Gene ID	14941
mRNA Refseq	NM_010372

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Protein Refseq	NP_034502
UniProt ID	P11033
Chromosome Location	14
Pathway	Activation;Apoptosis; Intrinsic Pathway for Apoptosis
Function	hydrolase activity;peptidase activity; serine-type peptidase activity

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