

DESCRIPTION

Species Reactivity	Human
Specificity	Detects both the pro and active forms of human Granzyme H in direct ELISAs and Western blots. In direct ELISAs, approximately 25% cross-reactivity with recombinant human Granzyme B is observed and approximately 5% cross-reactivity with recombinant mouse (rm) Granzyme C, rmGranzyme D, and rmGranzyme G is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Granzyme H Glu19-Leu246 Accession # P20718
Endotoxin Level	<0.01 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

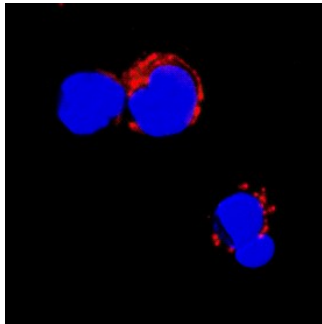
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the [Technical Information](#) section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human Granzyme H (Catalog # 1377-SE)
Immunocytochemistry	5-15 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Granzyme H (Catalog # 1377-SE), see our available Western blot detection antibodies

DATA

Immunocytochemistry



Granzyme H in Human PBMCs.

Granzyme H was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) using Goat Anti-Human Granzyme H Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1377) at 5 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

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 (1, 2). 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 (3). Human Granzyme H shows the highest amino acid identity (71%) to mouse Granzyme C (4). 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) (5-7). The pro-enzyme is expressed and purified. After being activated by active cathepsin C, rhGranzyme H cleaves a thioester substrate, which was described previously (8).

References:

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4. Sattar, R. *et al.* (2003) *Biochem. Biophys. Res. Comm.* **308**:726.
5. Meier, M. *et al.* (1990) *Biochemistry* **29**:4042.
6. Haddad, P. *et al.* (1991) *Int. Immunol.* **3**:57.
7. Klein, J.L. *et al.* (1990) *Tissue Antigens* **35**:220.
8. Edwards, K.M. *et al.* (1999) *J. Biol. Chem.* **274**:30468.