

DESCRIPTION

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|---------------------------|---|
| Species Reactivity | Human |
| Specificity | Detects human Granzyme A in direct ELISAs. |
| Source | Polyclonal Goat IgG |
| Purification | Antigen Affinity-purified |
| Immunogen | Mouse myeloma cell line NS0-derived recombinant human Granzyme A Cys26-Val262 Accession # P12544 |
| 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. |

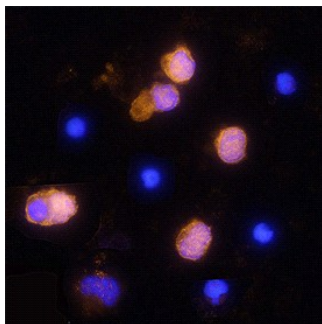
APPLICATIONS

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 |
|----------------------------|---|---------------|
| Immunocytochemistry | 5-15 µg/mL | See Below |
| ELISA | This antibody functions as an ELISA detection antibody when paired with Mouse Anti-Human Granzyme A Monoclonal Antibody (Catalog # MAB29052). <i>This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human Granzyme A DuoSet ELISA Kit (Catalog # DY2905-05) for convenient development of a sandwich ELISA.</i> | |

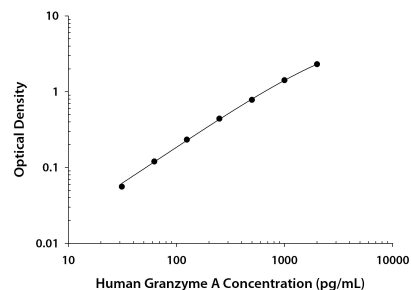
DATA

Immunocytochemistry



Granzyme A in Human PBMCs.
Granzyme A was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) using Goat Anti-Human Granzyme A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2905) at 15 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (yellow, Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

ELISA



Human Granzyme A ELISA Standard Curve. Recombinant Human Granzyme A protein was serially diluted 2-fold and captured by Mouse Anti-Human Granzyme A Monoclonal Antibody (Catalog # [MAB29052](#)) coated on a Clear Polystyrene Microplate (Catalog # [DY990](#)). Goat Anti-Human Granzyme A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2905) was biotinylated and incubated with the protein captured on the plate. Detection of the standard curve was achieved by incubating Streptavidin-HRP (Catalog # [DY998](#)) followed by Substrate Solution (Catalog # [DY999](#)) and stopping the enzymatic reaction with Stop Solution (Catalog # [DY994](#)).

PREPARATION AND STORAGE

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|--------------------------------|--|
| Reconstitution | Sterile PBS to a final concentration of 0.2 mg/mL. |
| 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 A 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. Granzyme A is the most abundant protease in CTL and NK cells. It induces caspase-independent cell death when introduced into target cells by perforin (1). Human granzyme A is synthesized as a 262 amino acid (aa) precursor with a signal peptide (aa 1-26), a propeptide (aa 27-28) and a mature chain (aa 29-262) (2). After being activated by lysyl endopeptidase removal of the propeptide, Granzyme A cleaves thioester substrates. Mature human granzyme A shares 71% amino acid sequence identity with mouse granzyme A.

References:

1. Lieberman, J. and Z. Fan (2003) *Curr. Opin. Immunol.* **15**:553.
2. Gershenfeld, H.K. *et al.* (1988) *Proc. Natl. Acad. Sci. USA* **85**:1184.