

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Granzyme B in ELISAs and Western blots. In sandwich immunoassays, less than 1% cross-reactivity with recombinant human (rh) rhGranzyme A, rhGranzyme B, recombinant mouse (rm) Granzyme D, rmGranzyme G, and rhGranzyme H is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Granzyme B Lys17-Ser247 Accession # P04187
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 as a 0.2 µm filtered solution in PBS.

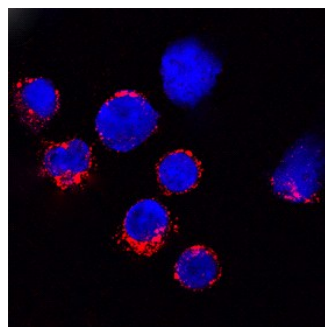
APPLICATIONS

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 Mouse Granzyme B (Catalog # 1865-SE)
Immunocytochemistry	5-15 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Mouse Granzyme B (Catalog # 1865-SE), see our available Western blot detection antibodies
Mouse Granzyme B Sandwich Immunoassay		Reagent
ELISA Capture	0.2-0.8 µg/mL	Mouse Granzyme B Antibody (Catalog # AF1865)
ELISA Detection	0.1-0.4 µg/mL	Mouse Granzyme B Biotinylated Antibody (Catalog # BAF1865)
Standard		Recombinant Mouse Granzyme B (Catalog # 1865-SE)
Neutralization	Measured by its ability to neutralize Recombinant Mouse Granzyme B (0.5 µg/mL, Catalog # 1865-SE) cleavage of the fluorogenic peptide substrate Boc-AAD-SBzl (100 µM). The Neutralization Dose (ND ₅₀) is typically 3.5 µg/mL.	

DATA

Immunocytochemistry



Granzyme B in Mouse Splenocytes.

Granzyme B was detected in immersion fixed mouse splenocytes stimulated with calcium ionomycin and PMA using Goat Anti-Mouse Granzyme B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1865) at 15 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 B 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 (1, 2). Granzyme B plays an essential role in granule-mediated apoptosis and may have additional roles in rheumatoid arthritis and in bacterial and viral infections (3). It activates various caspases and cleaves proteins such as aggrecan (3). Mouse Granzyme B is synthesized as a precursor (247 residues) with a signal and a pro peptide (residues 1-20) and a mature chain (residues 21-247) (4, 5). The recombinant mouse Granzyme B consisting of residues 17 to 247 was expressed and purified. After activation with cathepsin C, it cleaves a thioester substrate.

References:

1. Kam, C.-M. *et al.* (2000) *Biochim. Biophys. Acta* **1477**:307.
2. Smyth, M.J. *et al.* (1996) *J. Leukoc. Biol.* **60**:555.
3. Froelich, C.J. (2004) in *Handbook of Proteolytic Enzymes*, Barrett, A.J. *et al.* eds. p. 1549.
4. Lobe, C.G. *et al.* (1986) *Science* **232**:858.
5. Brunet, J.F. *et al.* (1986) *Nature* **322**:268.