

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Granzyme B in direct ELISAs and Western blots. In direct ELISAs, approximately 25% cross-reactivity with recombinant human Granzyme H is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Granzyme B Gly19-Tyr247 Accession # P10144
<b>Formulation</b>	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.

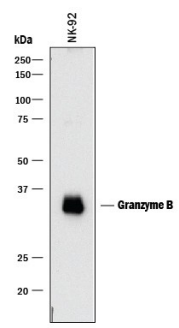
## APPLICATIONS

**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
<b>Western Blot</b>	0.25 µg/mL	See Below
<b>Simple Western</b>	10 µg/mL	See Below

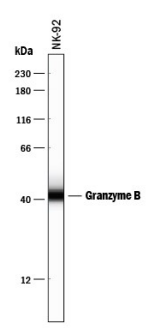
## DATA

**Western Blot**




**Detection of Human Granzyme B by Western Blot.** Western blot shows lysates of NK-92 human natural killer lymphoma cell line. PVDF membrane was probed with 0.25 µg/mL of Goat Anti-Human Granzyme B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2906) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for Granzyme B at approximately 32-35 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**Simple Western**



**Detection of Human Granzyme B by Simple Western™.** Simple Western lane view shows lysates of NK-92 human natural killer lymphoma cell line, loaded at 0.2 mg/mL. A specific band was detected for Granzyme B at approximately 42 kDa (as indicated) using 10 µg/mL of Goat Anti-Human Granzyme B Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2906) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## 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). Human Granzyme B is synthesized as a precursor (247 residues) with a signal peptide (residues 1-18), a pro peptide (residues 19-20), and a mature chain (residues 21-247) (4-6).

### 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., pp. 1549 - 1552.
4. Schmid, J. and C. Weissman (1987) *J. Immunol.* **139**:250.
5. Caputo, A. *et al.* (1988) *J. Biol. Chem.* **263**:6363.
6. Trapani, J.A. *et al.* (1988) *Proc. Natl. Acad. Sci. USA* **85**:6924.