Human Granzyme B PerCP-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 351927

Catalog Number: IC2906C

100 TESTS

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Granzyme B in direct ELISAs and Western blots. Does not cross-react with recombinant human (rh) Granzyme A, rhGranzyme H, recombinant mouse (rm) Granzyme B, rmGranzyme C, rmGranzyme D, or rmGranzyme G.
Source	Monoclonal Mouse IgG_{2A} Clone # 351927
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Granzyme B Gly19-Tyr247 Accession # P10144
Conjugate	PerCP (Peridinin-chlorophyll Protein Complex) Excitation Wavelength: 482 and 564 nm Emission Wavelength: 675 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

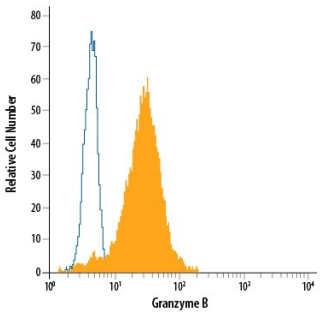
APPLICATIONS

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
Intracellular Staining by Flow Cytometry	10 µL/10^6 cells	See Below

DATA

Intracellular Staining by Flow Cytometry



Detection of Granzyme B in NK-92 Human Cell Line by Flow Cytometry. NK-92 human natural killer lymphoma cell line was stained with Mouse Anti-Human Granzyme B PerCP-conjugated Monoclonal Antibody (Catalog # IC2906C, filled histogram) or isotype control antibody (Catalog # IC003C, open histogram). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

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). The recombinant human (rh) Granzyme B consisting of residues 19-247 was expressed and purified. After being activated by active cathepsin C, rhGranzyme B cleaves a thioester substrate described previously (3).

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.

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