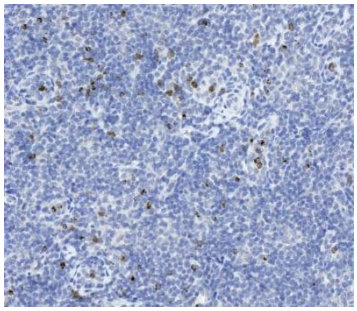
TIA-1
clone 2G9A10F5

Instructions for Use

Specification:
Originally, the 2G9 monoclonal antibody (mAb) was described as identifying a 15 kDa protein found in the cytoplasmic granules of cytotoxic T cells that might be part of a larger 40 kDa molecule, ubiquitously expressed, named p40-TIA-1 and often referred to as TIA-1 in the literature (1, 2). Now, however, there is evidence that the 2G9 mAb identifies a 17 kDa cytoplasmic granule membrane protein named GMP-17 that has no similarity with p40-TIA-1 (3). The GMP-17 antigen is a 165 amino acid protein with 4 transmembrane domains: but it is not a typical member of the fourtransmembrane superfamily. It is identical with previously identified cytotoxic granule proteins called NKG7 and GIG-1 – for GCSF induced gene protein 1 –, isolated from NK cells and granulocyte-colony-stimulatingfactor- treated mononuclear cells, respectively (4, 5).
The GMP-17 protein is also found in the granules of CD14+ monocytes and neutrophils (3, 6). Conversely, GMP-17 is not expressed in B lymphocytes or B-cell lines.
In humans, NKG7, the GMP-17 gene, is localized on chromosome 19q13-33 (4). As the target cell-induced NK cell degranulation results in translocation of GMP-17 from granules to the plasma membrane, a possible role for GMP-17 in the formation of junctions between effector cells and target cells has been suggested. Furthermore, sequence homology with calcium channel proteins has suggested that it may regulate ion channels required for cytotoxic effector functions (3). The 2G9 mAb was evaluated during the 5th HLDA Workshop on Human Leucocyte Differentiation Antigens, in the section of monoclonal antibodies reactive with intracellular antigens (7).

Availability:

Catalog No.	Contents	Volume
ILM25523 C01	TIA-1	0,1 ml concentrate
ILM25523 C05	TIA-1	0,5 ml concentrate
ILM25523 C1	TIA-1	1,0 ml concentrate



Intended use: For Research Use Only

Reactivity: Human

Clone: 2G9A10F5

Species of origin: Mouse

Isotype: IgG1

Control Tissue: Tonsil

Staining: Granular

Immunogen: Human bone marrow malignant cells from a non- B, non-T acute leukemia

Presentation: Liquid purified Ascites, purified with Protein G Chromatography with 15mM Sodium Azide

Application and suggested dilutions:
Pretreatment: Heat induced epitope retrieval in 10 mM citrate buffer, pH6.0, for 20 minutes is required for IHC staining on formalin-fixed, paraffin embedded tissue sections.

- Immunohistochemical staining of formalin-fixed, paraffin embedded tissue section (dilution 1:100- 1:200)

The optimal dilution for a specific application should be determined by the investigator.

Note: Dilution of the antibody in 10% normal goat serum followed by a goat anti-mouse secondary antibody-based detection is recommended.

Storage & Stability: Store at 2-8 °C. Do not use after expiration date printed on the vial.

References:

1) Anderson, P. et al, 1990, J. Immunol., 2, 144, 574.
2) Tian, Q., et al, 1991, Cell, 67, 629-639.
3) Medley, et al, 1996, Proc. Natl. Acad. Sci. U S A, 93, 2, 685-9.
4) Turman, M.A., et al, 1993, Hum. Immunol., 36, 1, 34-40.
5) Shimane, et al, 1994, Biochem Biophys Res Commun., 199, 1, 26-32.
6) Shimane, M., et al, 1999, J Leukoc Biol., 65, 1, 109-16.
7) Anderson, P., 1995, Leucocyte Typing V, White Cell Differentiation Antigens. Schlossman, S.F., et al., Eds., Oxford University Press, 325-327.