

Monoclonal Antibody Anti-TIA-1

PN IM2550 – Purified – Freeze-dried – 0.2 mg – Clone 2G9A10F5

For Research Use Only. Not for use in diagnostic procedures.

SPECIFICITY

The T cell intracellular antigen 1 (TIA-1) is a 17-kDa cytoplasmic granule-associated protein also designated as GMP-17, for granule membrane protein of 17 kDa (3). The GMP-17/TIA-1 molecule is expressed in cells possessing cytolytic potential (1, 2) and could be involved in the signaling cascade of Fas (CD95)-mediated apoptosis (2 – 4).

Within hematopoietic cell lines, the 2G9 monoclonal antibody (mAb) reacts with about 90% of CD16⁺, 50 – 60% of CD8⁺, and less than 10% of CD4⁺ normal peripheral blood lymphocytes (5). It reacts with almost all monocytes and granulocytes (3). This antibody also reacts with CD4⁺ activated T-cell clones, activated NK cell clones, and Con A-activated thymocytes, but not with B lymphocytes or B-cell lines (1, 5).

The 2G9 mAb was evaluated during the 5th HLDA Workshop on Human Leucocyte Differentiation Antigens in Boston, USA, in 1993 (section of monoclonal antibodies reactive with intracellular antigens) (6).

REAGENT

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Clone 2G9A10F5

Isotype IgG1, mouse

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

Hybridoma NS/Ag.4.1 X Balb/c spleen cells

Source Ascites fluid

Purification Ion exchange or affinity chromatography

Buffer 1 mg/mL bovine serum albumin in phosphate-buffered saline

APPLICATION

Flow cytometry.

STATEMENT OF WARNINGS

1. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
2. Never pipet with mouth and avoid contact of samples with skin and mucous membranes.
3. Do not use antibody beyond the expiration date on the label.
4. Avoid microbial contamination of reagents or incorrect results might occur.
5. Use good laboratory practices when handling this reagent.

STORAGE CONDITIONS AND STABILITY

This freeze-dried form may be stored at 2 – 8°C until the expiration date stated on the vial label.

No preservative has been added.

REAGENT PREPARATION

Depending of usage, reconstitute with 1 mL of distilled water, with or without 0.1% sodium azide (w/v).

The reconstituted form including 0.1% sodium azide may be stored for up to one month at 2 – 8°C.

The reconstituted form without sodium azide can be stored at –20°C or less, until the expiration date stated on the vial label.

In this case, aliquotting is recommended to avoid multiple freezing / thawing cycles.

PROCEDURE

For each application, it is recommended to establish the right range of antibody dilutions to be used for the experiment.

SELECTED RESEARCH REFERENCES

1. Anderson, P., Nagler-Anderson, C., O'Brien, C., Levine, H., Watkins, S., Slayter, H.S., Blue, M-L., Schlossman, S.F., "A monoclonal antibody reactive with a 17 kDa cytoplasmic granule associated protein defines a

subpopulation of CD8⁺ T lymphocytes", 1990, J. Immunol., 2, 144, 574.

2. Tian, Q., Streuli, M., Saito, H., Schlossman, S.F., Anderson, P., "A polydenylate binding protein localized to the granules of cytolytic lymphocytes induces DNA fragmentation in target cells", 1991, Cell, 67, 629-639.
3. Meehan, S.M., McCluskey, R.T., Pascual, M., Preffer, F.I., Anderson, P., Schlossman, S.F., Colvin, R.B., "Cytotoxicity and apoptosis in human renal allografts: Identification, distribution, and quantitation of cells with a cytotoxic granule protein GMP-17 (TIA-1) and cells with fragmented nuclear DNA", 1997, Lab. Invest., 76, 639-649.
4. Tian, Q., Taupin, J.L., Elledge, S., Robertson, M., Anderson, P., "Fas-activated serine/threonine kinase (FAST) phosphorylates TIA-1 during Fas-mediated apoptosis", 1995, J. Exp. Med., 182, 865-874.
5. Francis, C., Connelly, M.C., "Rapid single-step method for flow cytometric detection of surface and intracellular antigens using whole blood", 1996, Cytometry, 25, 58-70.
6. Anderson, P., "mAb reactive with lymphocyte-restricted intracellular antigens", 1995, Leucocyte Typing V, White Cell Differentiation Antigens. Schlossman, S.F., et al., Eds., Oxford University Press, 325-327.

PRODUCT AVAILABILITY

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For additional information in the USA, call 800-526-7694.

Outside the USA, contact your local Beckman Coulter representative.

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