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Monoclonal Antibody to CD5 - FITC

Alternate names: CD5, LEU1, Lymphocyte antigen T1/Leu-1, T-cell surface glycoprotein CD5

Catalog No.: AM05559FC-N

Quantity: 0.1 mg

Concentration: 0.1 mg/ml

Background: CD5 is a 55kDa T lymphocyte single chain transmembrane glycoprotein. It is present on all mature T lymphocytes, on most thymocytes and on many T cell leukemias and lymphomas. It reacts with a subpopulation of activated B cells. CD5/Lyt1 antigen is a monomeric type I transmembrane glycoprotein expressed on thymocytes, T lymphocytes, and a subset of B lymphocytes, but not on natural killer (NK) cells. It has been identified as the major ligand of the B cell antigen CD72. The frequency of CD5+ B cells exhibits strain dependent variation, and the phenotypic, anatomical, functional, developmental, and pathological characteristics of the CD5+ B cells suggest that they may represent a distinct lineage, known as B1 cells. Binding of CD5 on the T cell surface can augment alloantigen or mitogen induced lymphocyte proliferation and induces increased cytosolic free calcium, IL2 secretion, and IL2R expression. It has been proposed that CD5 negatively regulates signal transduction mediated by the T cell and B cell receptors.

Uniprot ID: Q9GMA0

NCBI: 9823

Host / Isotype: Mouse / IgG2a

Clone: 1H6/8

Immunogen: ConA/PMA activated porcine peripheral blood cells.

Format:
State: Liquid purified IgG
Purification: Affinity chromatography on Protein G
Buffer System: Phosphate buffered saline pH7.4 containing 0.09% Sodium Azide, 1% Bovine Serum Albumin
Label: FITC – Fluorescein Isothiocyanate Isomer 1

Applications:
Western Blot.
Immunoprecipitation.
Flow Cytometry: 1/10.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

This antibody is specific for the CD5 cell surface antigen, which is expressed by porcine T lymphocytes. In pigs, CD5 can be used to distinguish between NK cells (CD4- CD8+ CD5-) and MHC-restricted cytotoxic T cells (CD4- CD8+ CD5+). The epitope recognised by this clone was designated CD5a at the Second International Swine Workshop.
Species: Porcine.
Other species not tested.

Storage:

Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
This product is photosensitive and should be protected from light.
Shelf life: one year from despatch.

Caution:

(A full Health and Safety assessment is available upon request) This product contains Sodium Azide: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.

General Readings:

1. Pescovitz MD, Book BK, Aasted B, Dominguez J, Bullido R, Trebichavsky I, et al. Analyses of monoclonal antibodies reacting with porcine CD5: results from the Second International Swine CD Workshop. Vet Immunol Immunopathol. 1998 Jan 30;60(3-4):269-73. PubMed PMID: 9589565.
2. Saalmüller A, Pauly T, Lunney JK, Boyd P, Aasted B, Sachs DH, et al. Overview of the Second International Workshop to define swine cluster of differentiation (CD) antigens. Vet Immunol Immunopathol. 1998 Jan 30;60(3-4):207-28. PubMed PMID: 9589560.
3. Doménech N, Alvarez B, Bullido R, Alonso F, Ezquerra A, Domínguez J. A new epitope on swine CD5 molecule detected by monoclonal antibody 5F12/9. Hybrid Hybridomics. 2003 Jun;22(3):179-82. PubMed PMID: 12954104.
4. Sánchez-Torres C, Gómez-Puertas P, Gómez-del-Moral M, Alonso F, Escribano JM, Ezquerra A, et al. Expression of porcine CD163 on monocytes/macrophages correlates with permissiveness to African swine fever infection. Arch Virol. 2003 Dec;148(12):2307-23. Epub 2003 Sep 16. PubMed PMID: 14648288.

Pictures:

Staining of porcine peripheral blood lymphocytes with mouse anti porcine CD5:FITC