

Anti-Ms CD5 Purified Monoclonal Antibody

Catalog Number: M00480-3

Introduction

The clone MYG13 recognizes CD22 cell surface antigen, a 130-140kDa protein. The expression of CD22 is primarily restricted to the normal and neoplastic B cells but does not express on other hematopoietic cells. The initiation of expression of CD22 starts in the cytoplasm of pro-B and pre-B cells. Although CD22 is not expressed by plasma cells, it is abundantly expressed by the follicular mantle and marginal zone B-cells. Being a member of the immunoglobulin superfamily, CD22 serves as an adhesion receptor for sialic acid-bearing ligands expressed on erythrocytes and leukocytes. The role of CD22 in the activation of B-cells is primarily associated with tyrosine kinases mediated signal transduction pathways.

This antibody is routinely tested by flow cytometric analysis. Flow cytometry and other applications were tested during antibody development by CapricoBio or are reported in the literature.

Application Information

Each lot of this antibody has been pre-titrated and tested by flow cytometric analysis of human PBMCs such that 5ul of this product is sufficient for staining of 1 million cells in a 100ul staining volume or 100ul of whole blood. It is recommended that antibody reactivity be empirically titrated for optimal performance in the application of interest.

About CD5

CD5 antigen (T1; 67 kDa) is a human cell surface T-lymphocyte single-chain transmembrane glycoprotein. CD5 is expressed on all mature T-lymphocytes, most of thymocytes, subset of B-lymphocytes and on many T-cell leukemias and lymphomas. It is a type I membrane glycoprotein whose extracellular region contains three scavenger receptor cysteine-rich (SRCR) domains. The CD5 is a signal transducing molecule whose cytoplasmic tail is devoid of any intrinsic catalytic activity. CD5 modulates signaling through the antigen-specific receptor complex (TCR and BCR). CD5 crosslinking induces extracellular Ca⁺⁺ mobilization, tyrosine phosphorylation of intracellular proteins and DAG production. Preliminary evidence shows protein associations with ZAP-70, p56lck, p59fyn, PC-PLC, etc. CD5 may serve as a dual receptor, giving either stimulatory or inhibitory signals depending both on the cell type and development stage. In thymocytes and B1a cells it seems to provide inhibitory signals, in peripheral mature T lymphocytes it acts as a costimulatory signal receptor. CD5 is the phenotypic marker of a B cell subpopulation involved in the production of autoreactive antibodies. Disease relevance: CD5 is a phenotypic marker for some B cell lymphoproliferative disorders (B-CLL, Hairy cell leukemia, etc.). The CD5+ population is expanded in some autoimmune disorders (rheumatoid arthritis, etc.). Herpes virus infections induce loss of CD5 expression in the expanded CD8+ human T cells.

Overview

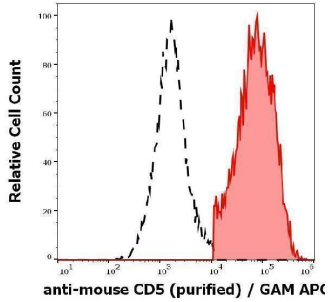
Product Name	Anti-Ms CD5 Purified Monoclonal Antibody
Reactive Species	Mouse
Description	Boster Bio Anti-Ms CD5 Purified Monoclonal Antibody (Catalog# M00480-3). Tested in Flow Cytometry, IP, IHC-P, IHC-F application(s). This antibody reacts with Mouse.
Conjugate	APC
Application	Flow Cytometry, IP, IHC-P, IHC-F

Clonality	Monoclonal 53-7.3
Formulation	Phosphate buffered saline (PBS), pH 7.4, 15 mM sodium azide
Storage Instructions	Store at 2-8°C. Do not freeze.
Host	Rat
Uniprot ID	P13379

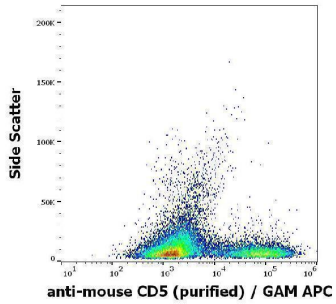
Technical Details

Immunogen	Murine thymus or spleen cells. The rat monoclonal antibody 53-7.3 recognizes an extracellular epitope of CD5, a 67kDa single-chain transmembrane glycoprotein expressed on mature T lymphocytes, most of thymocytes and B-1 lymphocytes.
Predicted Reactive Species	Bovine
Isotype	Rat IgG2a kappa
Form	Liquid
Concentration	1 mg/ml
Purification	Purified by protein-G affinity chromatography.
Suggested Dilutions	Flow cytometry: 1-4 ug/ml.

Anti-Ms CD5 Purified Monoclonal Antibody (M00480-3) Images



Separation of murine CD5 positive cells (red-filled) from CD5 negative cells (black-dashed) in flow cytometry analysis (surface staining) of murine splenocyte suspension stained using anti-mouse CD5 (53-7.3) purified antibody (concentration in sample 0,3 µg/ml, GAM APC).



Flow cytometry surface staining pattern of murine splenocyte suspension stained using anti-mouse CD5 (53-7.3) purified antibody (concentration in sample 0,3 µg/ml, GAM APC).

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