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InnoCyto Inc.

15375 Barranca Pkwy, Suite I-103
Irvine, CA 92618
Email: info@innocyto.com
Phone: 1-949-418-7543

FITC Anti-mouse CD24 Antibody

Catalog Number:	209003, 209004
Size:	50 µg, 500 µg
Target Name:	CD24, Ly-52, CD24 molecule; CD24A, heat-stable antigen (HSA)
Regulatory Status:	RUO

PRODUCT DETAILS

Clone:	M1/69
Application:	Flow Cytometry
Reactivity:	Mouse
Format:	FITC
Isotype:	Rat IgG2b
Antibody Type:	Monoclonal
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA
Protein Concentration:	0.2 mg/mL
Storage&Handling:	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Recommended Usage:	For flow cytometric staining, it is recommended to use less than 0.25 µg of this reagent per 0.5-1.0 million cells in a 100 µL volume. Optimal reagent performance should be determined by titration for each specific application. FITC has an excitation max at 493 nm and an emission max at 525 nm.
Excitation Laser:	Blue Laser (488 nm)
Isotype Controls:	303606
Antibody Family:	Mouse Antibodies
Storage & Handling:	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Isotype Control:	303606

BACKGROUND INFORMATION

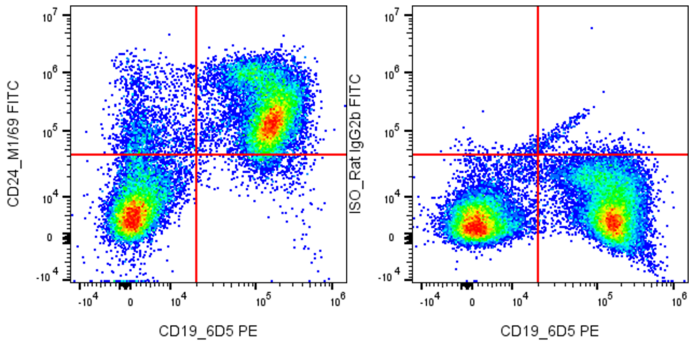
Mouse CD24, also known as heat-stable antigen (HSA), is a small, highly glycosylated cell-surface protein encoded by the Cd24a gene. It plays important roles in immune-cell development, cell adhesion, lymphocyte activation, and regulation of inflammatory responses. CD24 is expressed on various cell types, including developing B lymphocytes, granulocytes, hematopoietic progenitor cells, and certain epithelial and neural cells. Its expression pattern varies with tissue type and developmental stage, making it a useful marker for identifying and characterizing specific immune-cell populations in mice.

Mouse CD24 is a glycosylphosphatidylinositol (GPI)-anchored protein that lacks a conventional transmembrane region and intracellular signaling domain. Its protein backbone is relatively small but carries extensive N-linked and O-linked carbohydrate modifications, which account for much of its apparent molecular mass and contribute to its biological activity. CD24 mediates cellular interactions through its glycosylated extracellular surface. Important binding partners include P-selectin and Siglec-G, the mouse functional counterpart of human Siglec-10. CD24 can also participate in interactions with other cell-surface molecules involved in adhesion and immune regulation.

CD24 contributes to immune homeostasis by regulating inflammatory signaling and immune-cell responses. Its interaction with Siglec-G can suppress excessive inflammatory responses by limiting signaling triggered by damage-associated molecular patterns (DAMPs), including HMGB1 and heat-shock proteins. Dysregulated CD24 expression or signaling has been implicated in autoimmune inflammation, tissue injury, and cancer biology. In some tumor models, elevated CD24 expression may help cancer cells evade macrophage-mediated immune clearance.

Therapeutically, mouse CD24 is an important target for studying immune regulation and cancer immunotherapy. Modulating the CD24–Siglec-G pathway may help control excessive inflammation and tissue damage, while blocking this pathway may enhance macrophage-mediated tumor clearance. CD24-directed antibodies and related approaches are also useful research tools for investigating immune-cell development, differentiation, and tumor biology.

PRODUCT DATA



C57BL/6 Mouse splenocytes were stained with PE Anti-Mouse CD19 clone 6D5 and FITC Anti-Mouse CD24 clone M1/69 (left) or an isotype control (right).

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