

PRODUCT INFORMATION



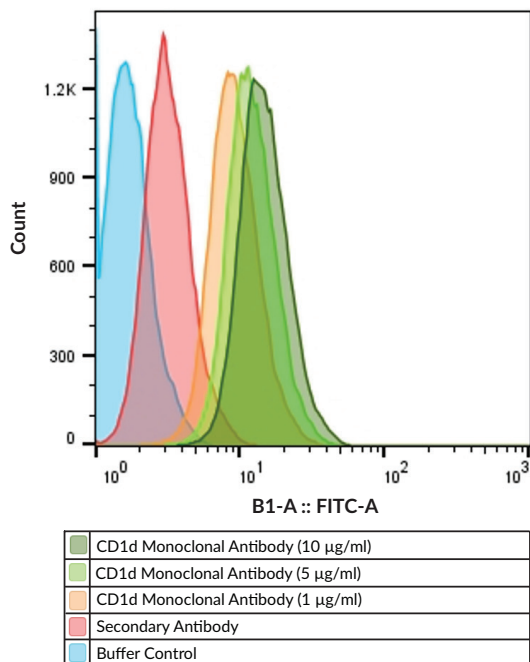
CD1d Monoclonal Antibody (Clone 59G)

Item No. 34936

Overview and Properties

Contents: This vial contains 100 µg of protein G-affinity purified monoclonal antibody.
Synonyms: Antigen-presenting Glycoprotein CD1d, CD1d Antigen, R3G1
Immunogen: Recombinant human CD1d extracellular domain/β2-microglobulin complex
Cross Reactivity: (+) CD1d
Species Reactivity: (+) Human; other species not tested
Uniprot No.: P15813
Form: Liquid
Storage: -20°C (as supplied)
Stability: ≥3 years
Storage Buffer: PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Clone: 59G
Host: Mouse
Isotype: IgG1
Applications: ELISA, Flow Cytometry (FC), and Western blot (WB); the recommended starting dilution is 1:500 for ELISA and WB and 1:100-1:200 for FC. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



THP-1 cells were fixed with 3.7% formaldehyde and blocked with 1% FBS. Cells were probed with the indicated amounts of CD1d Monoclonal Antibody, and a Goat Anti-Mouse (IgG+IgM) FITC secondary antibody (Item No. 10006617).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

CD1d is a lipid antigen-presenting molecule and a member of the group II CD1 family expressed by humans and mice.¹ It is composed of a heavy chain, a transmembrane region, and a short intracellular C-terminal tail.¹ The heavy chain contains three extracellular domains that associate with the light-chain β 2-microglobulin. It is expressed primarily by antigen-presenting cells.^{1,2} CD1d is directly involved in the process of presenting lipid antigens to T cells and invariant natural killer T (iNKT) cells to induce an immune response, including the secretion of specific cytokines depending on the antigen presented. Activation of iNKT cells by CD1d presentation of α -galactosylceramide (α -GalCer) in a murine model of melanoma reduces the number of metastases, but only when bone marrow-derived dendritic cells (BMDCs) were used to prolong iNKT cell responses.³ Cayman's CD1d Monoclonal Antibody (Clone 59G) can be used for ELISA, flow cytometry (FC), and Western blot (WB) applications. The antibody recognizes CD1d at approximately 52 kDa from human samples.

References

1. Florence, W.C., Bhat, R.K., and Joyce, S. CD1d-restricted glycolipid antigens: Presentation principles, recognition logic and functional consequences. *Expert. Rev. Mol. Med.* **10**, e20 (2008).
2. Joyce, S. CD1d and natural T cells: How their properties jump-start the immune system. *Cell Mol. Life Sci.* **58(3)**, 442-469 (2001).
3. Wen, X., Rao, P., Carreño, L.J., et al. Human CD1d knock-in mouse model demonstrates potent antitumor potential of human CD1d-restricted invariant natural killer T cells. *Proc. Natl. Acad. Sci. USA* **110(8)**, 2963-2968 (2013).

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