

PE anti-human CD1d Antibody

Catalog# / Size	350305 / 25 tests 350306 / 100 tests
Clone	51.1
Regulatory Status	RUO
Other Names	R3G1
Isotype	Mouse IgG2b, κ
Description	CD1d is a MHC-like, type I transmembrane protein, member of the CD1 family and the immunoglobulin superfamily. On the cell surface, CD1d forms a heterodimer with β 2-microglobulin. CD1d is expressed by antigen-presenting cells such as B cells, monocytes/macrophages, dendritic cells, and some non-lymphoid cells. Cortical thymocytes express CD1d but the expression is lost in mature T cells. CD1d presents lipid antigens to α NKT cells analogous to MHC molecule presentation of peptides to T cells.

Product Details

Verified Reactivity	Human
Reported Reactivity	Cynomolgus
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Human CD1d-Fc fusion
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
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.
Application	FC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is 5 μ l per million cells in 100 μ l staining volume or 5 μ l per 100 μ l of whole blood.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	Additional reported application (for the relevant formats) include: immunohistochemical staining of frozen tissue sections ¹ , Western blotting ^{1,2} , and induction of IL-12 production by crosslinking of CD1d ³ .
Application References	1. Exley M, <i>et al.</i> 2000. <i>Immunology</i> 100:37. (IHC, WB) 2. Durante-Mangoni E, <i>et al.</i> 2004. <i>J. Immunol.</i> 173:2159. (WB) 3. Yue SC, <i>et al.</i> 2005. <i>P. Natl. Acad. Sci. USA</i> 102:11811. (Stim)
(PubMed link indicates BioLegend citation)	
RRID	AB_10642028 (BioLegend Cat. No. 350305) AB_10641845 (BioLegend Cat. No. 350306)

Antigen Details

Structure	MHC-like, type I transmembrane protein, member of the CD1 family and the immunoglobulin superfamily
Distribution	Expressed by cortical thymocytes, monocytes, macrophages, dendritic cells, B cells (highly expressed on marginal zone B cells in particular), and in some non-lymphoid cells
Function	Present lipid antigens to <i>IN</i> KT cells
Ligand/Receptor	When loaded with a lipid, is recognized by the <i>V</i> α 14 <i>i</i> TCR from <i>IN</i> KT cells
Cell Type	B cells, Dendritic cells, Macrophages, Monocytes, Thymocytes
Biology Area	Immunology, Innate Immunity
Molecular Family	CD Molecules, MHC Antigens, TCRs
Antigen References	<ol style="list-style-type: none"> 1. Koch M, <i>et al.</i> 2005. <i>Nat. Immunol.</i> 6:819. 2. Liu X, <i>et al.</i> 2010. <i>P. Natl. Acad. Sci. USA</i> 107:13010. 3. Zeissig S, <i>et al.</i> 2010. <i>J. Clin. Invest.</i> 120:2889. 4. Teige A, <i>et al.</i> 2010. <i>J. Immunol.</i> 185:345.
Gene ID	912

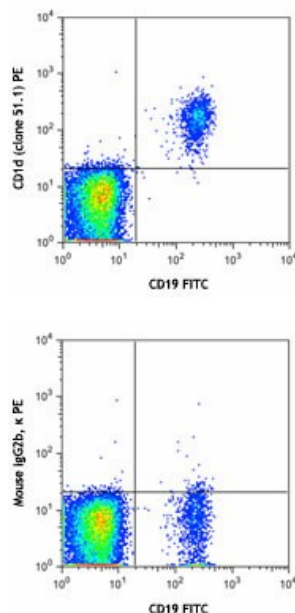
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Purified anti-human CD1d, PE anti-human CD1d, APC anti-human CD1d, PE/Cyanine7 anti-human CD1d, PerCP/Cyanine5.5 anti-human CD1d, Brilliant Violet 510™ anti-human CD1d, Brilliant Violet 421™ anti-human CD1d, TotalSeq™-A0164 anti-human CD1d, TotalSeq™-C0164 anti-human CD1d, Ultra-LEAF™ Purified anti-human CD1d, TotalSeq™-B0164 anti-human CD1d

Product Data



Human peripheral blood lymphocytes were stained with CD19 FITC and CD1d (clone 51.1) PE (top) or mouse IgG2b, κ PE isotype control (bottom).

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