

Datasheet: MCA5799F

Description:	MOUSE ANTI RAT CD1d:FITC
Specificity:	CD1d
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	WTH1
Isotype:	IgG2a
Quantity:	0.1 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	■			1/1,000
Immunohistology - Frozen			■	
Immunohistology - Paraffin			■	
ELISA			■	
Immunoprecipitation			■	
Western Blotting			■	
Functional Assays			■	

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Target Species	Rat								
Species Cross Reactivity	Reacts with: Mouse Does not react with:Cotton rat N.B. Antibody reactivity and working conditions may vary between species.								
Product Form	Purified IgM conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid								
Max Ex/Em	<table><tr><th>Fluorophore</th><th>Excitation Max (nm)</th><th>Emission Max (nm)</th></tr><tr><td>FITC</td><td>490</td><td>525</td></tr></table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	FITC	490	525		
Fluorophore	Excitation Max (nm)	Emission Max (nm)							
FITC	490	525							
Preparation	Purified IgG prepared by affinity chromatography on Protein A								
Buffer Solution	Phosphate buffered saline								
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)								
Approx. Protein	IgG concentration 0.5mg/ml								

Concentrations

Immunogen	Rat CD1d-transduced M12.4.1.C3 cells.
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External Database Links

UniProt:

[P11609](#) [Related reagents](#)

[Q63493](#) [Related reagents](#)

Entrez Gene:

[12479](#) Cd1d1 [Related reagents](#)

[25109](#) Cd1d1 [Related reagents](#)

Synonyms	Cd1.1, Cd1d1
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Specificity

Mouse anti Rat CD1d antibody, clone WTH1 recognizes rat CD1d, a glycoprotein expressed on cortical thymocytes, certain T-cell leukaemias and various other antigen presenting cells. CD1d binds self and non-self glycolipids and presents them to T-cell receptors on natural killer cells. When activated, natural killer cells produce Th1 and Th2 cytokines.

Clone WTH1 recognizes a different, non-overlapping epitope to clone [WTH2](#) and binds with high affinity to the mature CD1d heavy chain independently of beta-2-microglobulin. Mouse anti Rat CD1d antibody, clone WTH1 efficiently blocks rat and mouse invariant natural killer T cell (iNKT cell) response to α -GalCer (an antigen for iNKT cells) and has a slightly higher affinity to native CD1d than clone WTH2.

Clone WTH1 cross reacts weakly with mouse tissue in IHC and western blotting, but reacts strongly with both rat and mouse antigens in flow cytometry and immunoprecipitation.

Flow Cytometry	Use 10ul of the suggested working dilution to label 1×10^6 cells in 100ul.
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References

1. Monzon-Casanova, E. *et al.* (2010) CD1d expression in paneth cells and rat exocrine pancreas revealed by novel monoclonal antibodies which differentially affect NKT cell activation. [PLoS One 5:e13089](#)
 2. Fichtner AS *et al.* (2015) Function and expression of CD1d and invariant natural killer T-cell receptor in the cotton rat (*Sigmodon hispidus*). [Immunology. 146 \(4\): 618-29.](#)
 3. Monzon-Casanova, E. *et al.* (2013) Direct identification of rat iNKT cells reveals remarkable similarities to human iNKT cells and a profound deficiency in LEW rats. [Eur J Immunol. 43 \(2\): 404-15.](#)
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Storage

Store at +4°C or at -20°C if preferred.

Storage in frost-free freezers is not recommended.

This product should be stored undiluted. This product is photosensitive and should be protected from light.

Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life	18 months from date of despatch.
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Health And Safety Information

Material Safety Datasheet documentation #10040 available at:
10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

Related Products

Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:FITC \(MCA1210F\)](#)

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