

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse CD1d1 in direct ELISAs and Western blots. In direct ELISAs, approximately 70% cross-reactivity with recombinant mouse CD1d2 is observed, and approximately 15% cross-reactivity with recombinant human CD1d1 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse CD1d1 Gln22-Gly305 Accession # NP_031665
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

CD1d is a 48 kDa transmembrane glycoprotein that belongs to the CD1 family of glycolipid antigen-presenting MHC-like molecules. In mouse, there are two closely related CD1d genes, CD1d1 and CD1d2, whereas human and rat have only one (1, 2). Mature mouse CD1d1 consists of a 284 amino acid (aa) extracellular domain (ECD) with one Ig-like domain, a 21 aa transmembrane segment, and a 10 aa cytoplasmic tail (3). Within the ECD, mouse CD1d1 shares 94% aa sequence identity with mouse CD1d2, and 65% and 87% with human and rat CD1d, respectively. Complexes of CD1d1 with β 2-microglobulin and endogenous glycolipids are constitutively expressed on antigen presenting cells, cortical thymocytes, liver sinusoidal endothelial cells, Kupffer cells, and hepatocytes (1). A cytoplasmic motif mediates CD1d1 recycling through the endosomal/lysosomal system where it is loaded with processed exogenous glycolipids by saposin lipid transfer proteins (4 - 8). CD1d1-presented glycolipids are recognized by canonical NKT cells that utilize an invariant Va14-J α 18 chain in their T cell receptor (Va24-J α 18 in human) (9, 10). NKT cells that express V chains other than α 14 can also recognize CD1d1-presented glycolipids but do not require them to be endosomally loaded (10, 11). NKT cells respond to a variety of CD1d1-presented glycolipids including α -galactosylceramide (α -GalCer), a structural relative of microbial cell wall components, and the endogenous isoglobotrihexosylceramide (iGb3) (2, 9, 12). The interaction with glycolipid-loaded CD1d1 is critical for NKT cell development and induces their rapid secretion of both Th1 and Th2 type cytokines (10, 11, 13, 14). In humans, infection with HSV-1 suppresses NKT cell activation by blocking the intracellular cycling of CD1d in antigen presenting cells (15).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.