

## DESCRIPTION

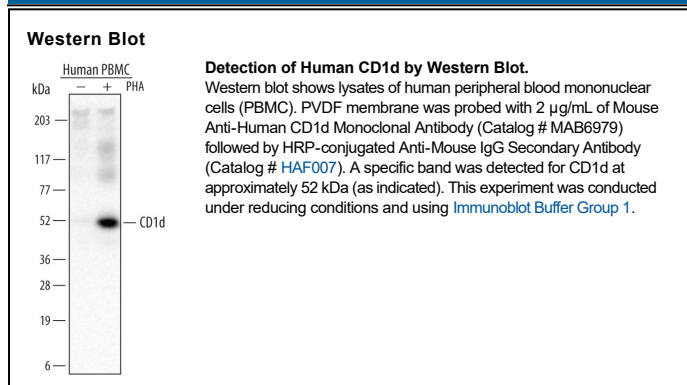
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human CD1d in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) CD1a, rhCD1b, rhCD1c, rhCD1e, recombinant mouse (rm) CD1d1, and rmCD1d2 is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 703335
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human CD1d Glu20-Ser301 (predicted) Accession # P15813
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

## 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	2 µg/mL	See Below

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

CD1d is a 48 kDa transmembrane glycoprotein in the CD1 family of glycolipid antigen-presenting MHC-like molecules. Mature human CD1d consists of a 282 amino acid (aa) extracellular domain (ECD) with one Ig-like domain, a 21 aa transmembrane segment, and a 13 aa cytoplasmic tail. Within aa 19-300 (the ECD), human CD1d shares 65% and 68% aa sequence identity with mouse and rat CD1d, respectively. Complexes of CD1d with β2-microglobulin and endogenous glycolipids are constitutively expressed on antigen presenting cells, cortical thymocytes, liver sinusoidal endothelial cells, Kupffer cells, and hepatocytes (1). CD1d-presented glycolipids are recognized by canonical NKT cells that utilize an invariant mouse Va14-Ja18 chain in their T cell receptor (Va24-Ja18 in human) (2, 3). The interaction with glycolipid-loaded CD1d is critical for NKT cell development and induces their rapid secretion of both Th1 and Th2 type cytokines (3-6). In humans, infection with HSV-1 suppresses NKT cell activation by blocking the intracellular cycling of CD1d in antigen presenting cells (7).

## References:

1. Bendelac, A. *et al.* (2007) Annu. Rev. Immunol. **25**:297.
2. Kawano, T. *et al.* (1997) Science **278**:1626.
3. Chiu, Y.H. *et al.* (1999) J. Exp. Med. **189**:103.
4. Behar, S.M. *et al.* (1999) J. Immunol. **162**:161.
5. Mendiratta, S.K. *et al.* (1997) Immunity **6**:469.
6. Stanic, A.K. *et al.* (2003) J. Immunol. **171**:4539.
7. Yuan, W. *et al.* (2006) Nat. Immunol. **7**:835.