Human CD300f/LMIR3 Antibody

Monoclonal Rat IgG_{2B} Clone # 234903

Catalog Number: MAB2774

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD300f/LMIR3 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human LMIR1, 2, 4, 5, 6, or recombinant mouse LMIR3 is observed.
Source	Monoclonal Rat IgG_{2B} Clone # 234903
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Y3 rat myeloid cell line transfected with human CD300f/LMIR3
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

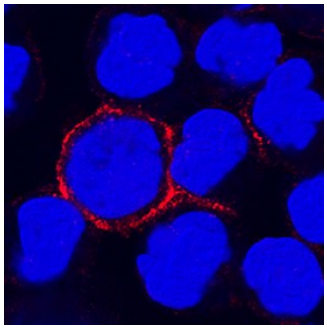
APPLICATIONS

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.*

	Recommended Concentration	Sample
Flow Cytometry	0.25 µg/10^6 cells	Human whole blood monocytes
Immunocytochemistry	8-25 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

Immunocytochemistry



CD300f/LMIR3 in Human PBMCs. CD300f/LMIR3 was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) using Rat Anti-Human CD300f/LMIR3 Monoclonal Antibody (Catalog # MAB2774) at 15 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # NL013) and counterstained with DAPI (blue). Specific staining was localized to cell surfaces. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	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
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

Human CD300f/LMIR3 Antibody

Monoclonal Rat IgG_{2B} Clone # 234903

Catalog Number: MAB2774

BACKGROUND

CD300f, also known as CD300LF, LMIR3, IREM-1, CLM-1, IgSF13, DIgR1, and MAIR-V, is a 50-60 kDa glycoprotein member of the immunoglobulin superfamily (1). Human CD300f consists of a 137 amino acid (aa) extracellular domain (ECD) with one Ig-like V-type domain, a 21 aa transmembrane segment, and a 113 aa cytoplasmic domain that contains multiple immunoreceptor tyrosine-based inhibitory motifs (ITIMs) or ITIM-like sequences (2, 3). Alternate splicing generates additional isoforms that carry substituted C-terminal tails of varying lengths and sequences following the ECD or transmembrane segment (3). Within the ECD, human CD300f shares 43% aa sequence identity with mouse and rat CD300f. CD300f is expressed on the surface of dendritic cells, monocytes, granulocytes, and mast cells as well as on acute myeloid leukemia (AML) blasts (2-4). Pervanadate treatment or antibody crosslinking of CD300f induces phosphorylation of tyrosine residues in the cytoplasmic domain and the subsequent recruitment of phosphatases SHIP, SHP-1, SHP-2, and the p85 alpha subunit of PI3K (2, 3, 5, 6). CD300f ligation can induce cell death and inhibit signaling through multiple receptors including Fc epsilon RI, LMIR4, SCF R, TLR2, TLR3, and TLR9 (3-8). In contrast, it enhances TLR4-mediated signaling/cytokine production in mast cells through association with the activating signaling protein FcR gamma (5). In mouse, a splice variant of CD300f (known as DIgR2, with a 7 aa insertion in the ECD) inhibits CD4+ T cell activation and *in vivo* Th1 and CTL responses (9). CD300f is upregulated on monocytes surrounding experimentally-induced spinal cord demyelination and functions as a negative regulator of inflammation in the CNS (10).

References:

1. Clark, G.J. *et al.* (2009) Trends Immunol. **30**:209.
2. Sui, L. *et al.* (2004) Biochem. Biophys. Res. Commun. **319**:920.
3. Alvarez-Errico, D. *et al.* (2004) Eur. J. Immunol. **34**:3690.
4. Korver, W. *et al.* (2009) Leukemia **23**:1587.
5. Izawa, K. *et al.* (2009) J. Immunol. **183**:925.
6. Alvarez-Errico, D. *et al.* (2007) J. Immunol. **178**:808.
7. Can, I. *et al.* (2008) J. Immunol. **180**:207.
8. Izawa, K. *et al.* (2007) J. Biol. Chem. **282**:17997.
9. Shi, L. *et al.* (2006) Blood **108**:2678.
10. Xi, H. *et al.* (2010) J. Exp. Med. **207**:7.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956