SONY

Product Data Sheet

PE/Cy7 anti-mouse CD301b (MGL2)

Catalog # / Size: 1334040 / 100 µg
1334035 / 25 µg

Clone: URA-1

Isotype: Rat IgG2a, λ

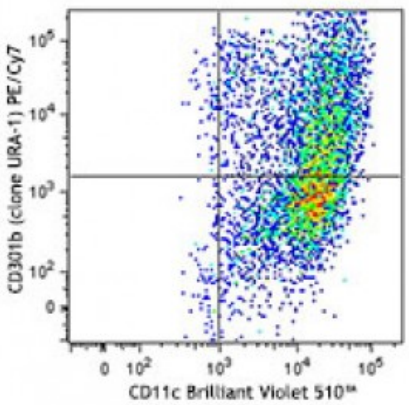
Immunogen: Purified and recombinant mouse MGL2

Reactivity: Mouse

Preparation: The antibody was purified by affinity chromatography and conjugated with PE/Cy7 under optimal conditions. The solution is free of unconjugated PE/Cy7 and unconjugated antibody.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Concentration: 0.2

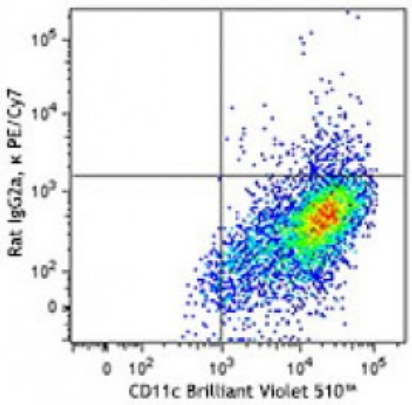


C57BL/6 bone marrow-derived dendritic cells were stained with CD11c Brilliant Violet 510™ and CD301b (clone URA-1) PE/Cy7 (top) or rat IgG2a, κ PE/Cy7 isotype control (bottom).

Applications:

Applications: Flow Cytometry

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 ≤1.0 microg per million cells in 100 microL volume. It is recommended that the reagent be titrated for optimal performance for each application.



Description: Mouse CD301, also known as macrophage galactose-type C-type lectin, has two homologue genes, CD301a (MGL1) and CD301b (MGL2), while there is only one MGL in human and rat. Mouse CD301a and CD301b are ~42 kD type II transmembrane glycoproteins containing a cytoplasmic domain, a transmembrane domain, a neck domain, and a carbohydrate recognition domain (CRD) within each molecule. CD301a is mainly expressed on a subset of macrophages and immature dendritic cells (DCs). CD301b is mainly found on conventional DCs. Although CD301a and CD301b share high amino acid sequence homology (92% for the intact sequence and 80% for the CRD), they display different carbohydrate specificities. CD301a was found to be highly specific for Lewis X and Lewis A structures, whereas CD301b, more similar to human MGL, recognizes N-actetylgalactosamine (GalNAc) and galactose, including the O-linked Tn-antigen, TF-antigen, and core 2. So far, CD301a has been reported to be involved in recognition and endocytosis of glycoproteins with terminal Gal/GalNAc moieties. This contributes to defense against tumor cell metastasis, tissue remodeling, and clearance of apoptotic cells in embryos. CD301b is involved in the internalization of soluble polyacrylamide polymers (PAA) with α-GalNAc residues (GalNAc-PAA) in bone marrow derived DCs.

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Antigen References:

1. Denda-Nagai K, *et al.* 2010. *J. Biol. Chem.* 285:19193.
2. Westcott D, *et al.* 2009. *J. Exp. Med.* 206:3143.
3. Singh SK, e*t al.* 2009. *Mol. Immunol.* 46:1240.
4. Sakakura M,