DVS Sciences

Product Information Sheet

Anti-Human CD303 (BDCA-2)-147Sm

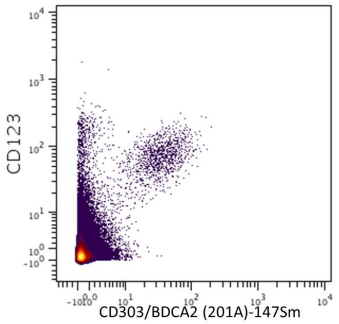
Catalog #: 3147009B
Package Size: 100 tests
Storage: Store product at 4°C. Do not freeze.
Cross Reactivity: Human

Clone: 201A
Isotype: Mouse IgG2a
Formulation: Antibody stabilizer with 0.05% Sodium Azide

Technical Information

Validation: Each lot of conjugated antibody is quality control tested by CyTOF® analysis of stained cells using the appropriate positive and negative cell staining and/or activation controls.

Recommended Usage: The suggested use is 1 µl for up to 3 X 10^6 live cells in 100 µl. It is recommended that the antibody be titrated for optimal performance for each of the desired applications.



Human PBMCs stained with 151Eu-anti-CD123 (6H6) and 147Sm-anti-CD303 (201A). Lymphocytes are displayed in the analysis.

Description

CD303, also known as blood dendritic cell antigen-2 (BDCA-2), is a type II transmembrane glycoprotein that belongs to the C-type lectin superfamily. CD303 is the most specific marker for human pDC and is only expressed in humans. CD303 consists of a single extracellular carbohydrate recognition domain (CRD), a transmembrane region, and a short cytoplasmic domain without an obvious signaling motif. CD303 transmits intracellular signals through an associated transmembrane adaptor, the FcεRγ , which recruits the protein tyrosine kinase Syk, inducing protein tyrosine phosphorylation and calcium mobilization. CD303 signaling inhibits type I IFN secretion, preventing immune surveillance. CD303 is also involved in other pDC functions, such as the inhibition of soluble TNF-related apoptosis-inducing ligand (TRAIL) secretion, which mediates the killing of target cells that express the TRAIL receptor. Although CD303 is a key marker of pDC, the nature and identity of CD303 ligands are presently unknown.

References

Bandura, D. R., et al. Mass Cytometry: Technique for Real Time Single Cell Multitarget Immunoassay Based on Inductively Coupled Plasma Time-of-Flight Mass Spectrometry. *Analytical Chemistry* 81:6813-6822, 2009.

Ornatsky, O. I., et al. Highly multiparametric analysis by mass cytometry. J Immunol Methods 361 (1-2):1-20, 2010.

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