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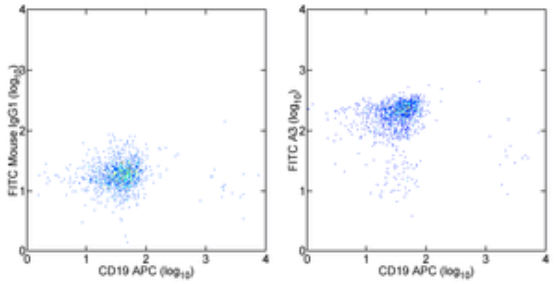
Anti-Human CD148 FITC

Catalog Number: 11-1489
Also Known As:DEP-1, DEP1, high cell density-enhanced protein tyrosine phosphatase 1
RUO: For Research Use Only



Staining of normal human peripheral blood cells with Anti-Human CD19 APC (cat. 17-0199) and Mouse IgG1 κ Isotype Control FITC (cat. 11-4714) (left) or Anti-Human CD148 FITC (right). Cells in the monocyte gate were used for analysis.

Product Information

Contents: Anti-Human CD148 FITC
REF Catalog Number: 11-1489
Clone: A3
Concentration: Suffix -71/73, 20 µL (0.5 µg)/test; Suffix -41/42, 5 µL (0.5 µg)/test
Host/Isotype: Mouse IgG1, κ

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer
Temperature Limitation: Store at 2-8°C. Do not freeze. Light sensitive material.
LOT Batch Code: Refer to Vial
Use By: Refer to Vial
Caution, contains Azide

Description

The monoclonal antibody A3 recognizes human CD148 also known as Dep-1 (density-enhanced protein tyrosine phosphatase) and ByP. CD148 is a highly glycosylated transmembrane protein, up to 250kDa, containing eight Fibronectin Type III domains in the extracellular region and one tyrosine phosphatase domain in the cytoplasmic region. Expression is found broadly including fibroblasts, epithelial cells, lymphocytes (B, T and NK cells), and myeloid cells (monocytes and granulocytes). CD148 expression can be upregulated following T cell activation. The role for CD148 has been shown to involve the dephosphorylation of proteins such as LAT and PLC-γ. One key role is the down regulation of Tcell activation. Recently CD148 has been shown to be excluded from the synapse (junction between T cells and antigen presenting cells APCs). Once the synapse disengages, CD148 can relocate and exert its effects to down-regulate the activated state. Furthermore expression of CD148 has been shown to inhibit the growth of breast cancer cells in vitro.
The monoclonal antibody A3 can neutralize the negative signal from T cell activation thereby causing activation of T cells.

Applications Reported

This A3 antibody has been reported for use in flow cytometric analysis.

Applications Tested

This A3 antibody has been pre-titrated and tested by flow cytometric analysis of normal human peripheral blood cells. Refer to catalog number suffix on the vial for amount to use per test: 71/73 are 20 µL (0.5 µg) per test; whereas 41/42 are 5 µL (0.5 µg) per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test.

References

Baker JE, Majeti R, Tangye SG, Weiss A. Protein tyrosine phosphatase CD148-mediated inhibition of T-cell receptor signal transduction is associated with reduced LAT and phospholipase Cgamma1 phosphorylation. Mol Cell Biol. 2001 Apr;21(7):2393-403. (A3, FC, PubMed)

Tangye SG, Phillips JH, Lanier LL, de Vries JE, Aversa G. CD148: a receptor-type protein tyrosine phosphatase involved in the regulation of human T cell activation. J Immunol. 1998 Oct 1;161(7):3249-55. (A3, FC, FA, PubMed)

Related Products

11-4714 Mouse IgG1 K Isotype Control FITC

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