



SIRP, alpha1 (SIRPa, Signal Regulatory Protein, SHPS-1, BIT, p84, CD172a) (FITC)

Catalog number

S1013-87H1

Supplier

United States Biological

CD172a, also known as signal-regulatory protein alpha, a receptor-type transmembrane glycoprotein expressed on cells of myeloid origin, including granulocytes, dendritic cells (DCs), macrophages, mast cells and haematopoietic stem cells. CD172a acts as a substrate for several activated tyrosine kinases, including EGFR, PDGFR, src and insulin receptor and is involved in the negative regulation of receptor tyrosine kinase-coupled signaling pathways. Ligand binding of CD172a to integrin-associated protein CD47, results in tyrosine kinase phosphorylation of immunoreceptor tyrosine-based inhibitory motifs (ITIMs) within the cytoplasmic region of CD172a, mediating the recruitment and activation of the tyrosine phosphatases SHP-1 and SHP-2. These then act as regulators of cellular function, through dephosphorylation of specific substrates. Ligation of CD172a with CD47 has been demonstrated in several regulatory processes, including the inhibition of host cell phagocytosis by macrophages and the bi-directional activation of T cells and DCs.

Applications

Suitable for use in Flow Cytometry. Other applications not tested.

Recommended Dilution

Flow Cytometry: Neat, 1:10. Use 10ul to label 1×10^6 cells in 100ul.
Optimal dilutions to be determined by the researcher.

Hybridoma

Spleen cells from immunized Balb/c mice were fused with cells of the X63-Ag8.653 myeloma cell line

Storage and Stability

Store product at 4°C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and store at -20°C. Aliquots are stable at -20°C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer.

Caution: FITC conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.

Immunogen

Monocyte-derived dendritic cells.

Formulation

Supplied as a liquid in PBS, pH 7.4, 1% BSA, 0.09% sodium azide. Labeled with Fluorescein isothiocyanate (FITC).

Purity

Purified by Protein G affinity chromatography from tissue culture supernatant.



Specificity

Specific for human CD172a.

Product Type

Mab

Source

human

Isotype

IgG2a

Grade

Affinity Purified

Applications

FC

Crossreactivity

Hu

Storage

-20°C

Detection Method

FITC

Reference

1. Fujioka, Y. et al. (1996) A novel membrane glycoprotein, SHPS-1, that binds the SH2-domain-containing protein tyrosine phosphatase SHP-2 in response to mitogens and cell adhesion. *Mol. Cell Biol.* 16: 6887-6899.
2. van Beek, E.M. et al. (2005) Signal regulatory proteins in the immune system. *J. Immunol.* 175: 7781-7787.