Monoclonal Anti-SIRPβ1/CD172b
Clone B1D5
produced in mouse, purified immunoglobulin

Catalog Number S2572

Product Description
Monoclonal Anti-SIRPβ1/CD172b (mouse IgG2a isotype) is derived from the hybridoma B1D5 produced by the fusion of mouse myeloma cells (SP2/0) and splenocytes from BALB/c mice immunized with a recombinant fusion protein containing the complete extracellular domain of SIRPβ1 (Gene ID: 10326). The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-SIRPβ1/CD172b recognizes human SIRPβ, but not SIRPα. The antibody may be used in flow cytometry, immunoprecipitation, and immunoblotting (~90 kDa). The antibody may react with monocytes, granulocytes, CD19+ B-cell precursors, CD33+ myeloid progenitor cells, and cells transfected with SIRPβ1.

Signal-regulatory proteins (SIRPs), also known as SHPS-1-src homology 2 domain-containing phosphatase substrate-1, BIT (brain immunoglobulin [lg]-like molecule with a tyrosine-based activation motif), P84, and MFR (macrophage fusion receptor), are a family of transmembrane glycoproteins, involved in receptor tyrosine kinase coupled signaling pathways. This family of receptors contains a large extracellular region with three Ig-like loops. The SIRP family is involved in adhesive processes, fusion of macrophages and binding of SIRP+ dendritic cells (DCs) to CD4+ T cells. This family of proteins contains three members, SIRPα, SIRPβ, and SIRPγ. All three are expressed in cells of the immune system and SIRPα is also expressed on neurons. SIRPβ1 is expressed on myeloid cells, including monocytes, granulocytes and dendritic cells. This protein, unlike SIRPα, does not bind CD47 and lacks cytoplasmic motifs for signaling. However, it contains a trans-membrane region with a positively charged lysine residue that mediates association with an adaptor protein, DAP12. The latter can activate the MAPK pathway. Activation of SIRPβ1 receptor in a complex with DAP12, promotes phagocytosis in macrophages.

Reagent
Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~2 mg/mL

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability
For extended storage, freeze at −20 °C in working aliquots. Repeated freezing and thawing, or storage in “frost-free” freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discard if not used within 12 hours.

Product Profile
Flow cytometry: a working concentration of 1-2 µg per test is recommended using human blood.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References