Human SIRP beta 2 Antibody
Monoclonal Mouse IgG2B Clone # 1008702
Catalog Number: MAB99981

DESCRIPTION
Species Reactivity Human
Specificity Detects human SIRP beta 2 in direct ELISAs.
Source Monoclonal Mouse IgG2B Clone # 1008702
Purification Protein A or G purified from hybridoma culture supernatant
Immunogen HEK293 human embryonic kidney cell line, HEK293 derived Human SIRP beta 2
Gln33-Gly287
Accession # Q5JXA9
Formulation Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

APPLICATIIONS
Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

<table>
<thead>
<tr>
<th>Recommended Concentration</th>
<th>Sample</th>
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<tr>
<td>Flow Cytometry 0.25 μg/10^6 cells</td>
<td>See Below</td>
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<tr>
<td>CyTOF-ready</td>
<td>Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.</td>
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DATA
Flow Cytometry
Detection of SIRP beta 2 in HEK293 Human Cell Line Transfected with Human SIRP beta 2 and eGFP by Flow Cytometry. HEK293 human embryonic kidney cell line transfected with (A) SIRP beta 2 or (B) irrelevant protein, and eGFP were stained with Mouse Anti-Human SIRP beta 2 Monoclonal Antibody (Catalog # MAB99981) followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). Quadrant markers were set based on Mouse IgG2B Isotype Control Antibody staining (Catalog # MAB0041, data not shown). View our protocol for Staining Membrane-associated Proteins.

Flow Cytometry
Detection of SIRP beta 2 in THP-1 Cells by Flow Cytometry. THP-1 monocytic leukemia cell line was stained with Mouse Anti-Human SIRP beta 2 Monoclonal Antibody (Catalog # MAB99981, filled histogram) or Mouse IgG2B Isotype Control Antibody (Catalog # MAB0041, open histogram) followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). View our protocol for Staining Membrane-associated Proteins.

PREPARATION AND STORAGE
Reconstitution Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND
Signal-regulatory protein beta-2 (SIRP-beta-2), also known as CD172b, is a ~37 kDa monomeric single pass type I membrane glycoprotein. It belongs to the SIRP/SHPS (CD172) family of the immunoglobulin (Ig) superfamily (1). The SIRP family are paired receptors that have similar extracellular domains but differ in C-terminal domains and functions (1). SIRP-beta-2 contains an N-terminal signal peptide (aa 1–32), two extracellular Ig-like domains: a V-type 1 (aa 33–143) and a V-type 2 (aa 157–258) containing three potential N-linked glycosylation sites, a helical transmembrane domain (aa 288–308), and a cytoplasmic domain (aa 309–342) (1). A positively charged residue within the transmembrane domain, in analogy to SIRP-beta-1, is implicated to mediate interaction with the adaptor DAP12 protein, which contains immunoreceptor tyrosine-based activation motifs (ITAMs) (2). Proteins in the SIRP family are typically expressed in immune cells, especially in the myeloid lineages (3). Based on expression patterns, SIRPs are thought to have roles in immune regulation (4). SIRP family members play a role in innate immunity and host defense has potential significance as a therapeutic target in cancer and inflammation (5, 6). There are currently no known mouse or rat homologs for this protein.

References:

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