SONY

Product Data Sheet

Purified anti-human CD172a/b (SIRPα/β)

Catalog # / Size: 2219010 / 100 µg
2219005 / 25 µg

Clone: SE5A5

Isotype: Mouse IgG1, κ

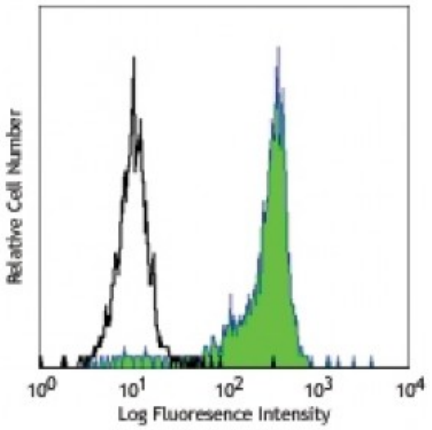
Immunogen: NIH-3T3/hu-SIRPα cell line

Reactivity: Human

Preparation: The antibody was purified by affinity chromatography.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Concentration: 0.5



Human peripheral blood monocytes stained with purified SE5A5, followed by anti-mouse-IgG FITC

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤2.0 microg per million cells in 100 microL volume. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: Clone SE5A5 recognizes a common epitope on SIRPα (90 kD) and SIRPβ (50 kD)3. A high degree of homology has been found between SIRP family isoforms α and β at the level of extracellular domains. Consequently, many anti SIRP antibody clones, such as SE5A5, have been reported to cross react with several SIRP isoforms[1,4,5]. It reacts with CD172a and has weak cross-reaction with CD172b. This antibody is able to block the binding of SIRPα (SIRPα1 and SIRPα2) to CD47[1,6].

Application References:

1. Seiffert M, *et al.* 1999. *Blood* 94:3633.
2. Dubois NC, *et al.* 2011. *Nat. Biotechnol.* 29:1011.
3. Barros MM, *et al.* 2009. *Transfusion* 49:154.
4. Liu Y, *et al.* 2005. *J. Biol. Chem.* 280:36132.
5. Barclay AN. 2009. *Curr. Opin. Immunol.* 21:47.
6. Florian S, *et al.* 2005. *J. Leukoc. Biol.* 77:984.

Description: CD172a, also known as signal-regulatory protein α (SIRPα), src homology 2 domain-containing phosphatase substrate-1 (SHPS1), PTPNS1, BIT, MFR, and P84, is a 75-110 kD transmembrane glycoprotein involved in receptor tyrosine kinase coupled signaling pathway. It belongs to the Ig superfamily and is primarily expressed on monocytes/macrophages, granulocytes, dendritic cells, and neurons. CD172a serves as a substrate of activated receptor tyrosine kinases (RTKs). The interaction of CD172a intracellular domain with SHP-1 and SHP-2 displays negative signaling in the regulation of leukocyte adhesion and transmigration, T cell activation, macrophage fusion, and phagocytosis. CD47 (IAP) is the extracellular ligand for CD172a. SIRPα was recently demonstrated to be a specifc marker for cardiomyocytes derived from human pluripotent stem

cells2.

Antigen References:
1. Seiffert M, *et al.* 1999. *Blood* 94:3633.
2. Seiffert M, *et al.* 2001. *Blood* 97:2741.
3. Timms JF, *et al.* 1998. *Mol. Cell Biol.* 18:3838.
4. Barclay AN and Brown MH. 2006. *Nat. Rev*