

Alexa Fluor™ 700 anti-human CD172a/b (SIRPα/β)

Catalog # / Size: 2219080 / 100 tests
2219075 / 25 tests

Clone: SE5A5

Isotype: Mouse IgG1, κ

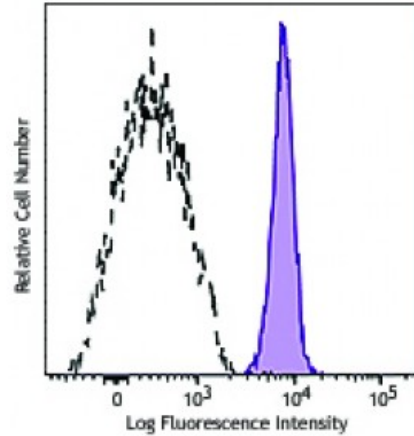
Immunogen: NIH-3T3/hu-SIRPα cell line

Reactivity: Human

Preparation: The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 700 under optimal conditions.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).

Concentration: Lot-specific



Human peripheral blood granulocytes were stained with anti-human CD172a/b (SIRPα/β) Alexa Fluor® 700 (clone SE5A5, filled histogram) or mouse IgG1, κ Alexa Fluor® 700 isotype control (open histogram).

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 5 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

* Alexa Fluor® 700 has a maximum emission of 719 nm when it is excited at 633 nm / 635 nm. Prior to using Alexa Fluor® 700 conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.

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. SIRP α was recently demonstrated to be a specific 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*