

APC/Fire™ 750 anti-human CD172a/b (SIRPα/β)

Catalog # / Size: 2219085 / 25 tests
2219090 / 100 tests

Clone: SE5A5

Isotype: Mouse IgG1, κ

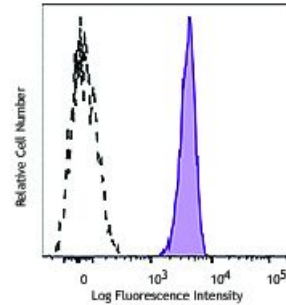
Immunogen: NIH-3T3/hu-SIRPα cell line

Reactivity: Human, Non-human primate, Other

Preparation: The antibody was purified by affinity chromatography and conjugated with APC/Fire™ 750 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) APC/Fire™ 750 (clone SE5A5) (filled histogram) or mouse IgG1, κ APC/Fire™ 750 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 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.

* APC/Fire™ 750 has a maximum excitation of 650 nm and a maximum emission of 787 nm.

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 alpha and beta 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 (SIRP α), 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. Immunol.* 6:457.