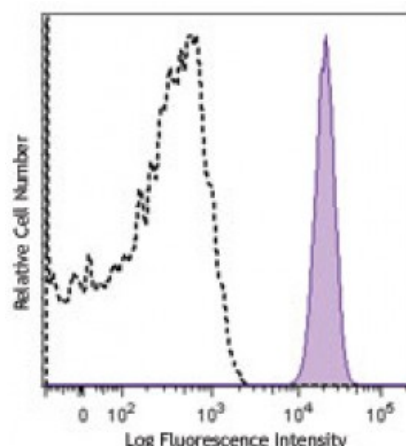


APC anti-human CD172a/b (SIRP α / β)

Catalog # / Size:	2219050 / 100 tests 2219045 / 25 tests
Clone:	SE5A5
Isotype:	Mouse IgG1, κ
Immunogen:	NIH-3T3/hu-SIRP α cell line
Reactivity:	Human
Preparation:	The antibody was purified by affinity chromatography and conjugated with APC under optimal conditions. The solution is free of unconjugated APC and unconjugated antibody.
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 (SIRP α / β) APC (clone SE5A5) (filled histogram) or mouse IgG1, κ APC 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.

Application Notes: Clone SE5A5 recognizes a common epitope on SIRP α (90 kD) and SIRP β (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 SIRP α (SIRP α 1 and SIRP α 2) 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*