SONY

Product Data Sheet

PE/Cyanine7 anti-human CD172a/b (SIRPα/β)

Catalog # / Size: 2219040 / 100 tests
2219035 / 25 tests

Clone: SE5A5

Isotype: Mouse IgG1, κ

Immunogen: NIH-3T3/hu-SIRPα cell line

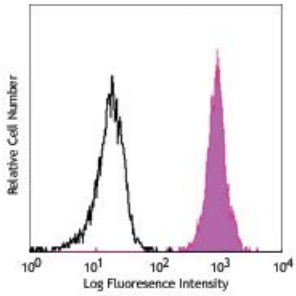
Reactivity: Human, Non-human primate, Other

Preparation: The antibody was purified by affinity chromatography, and conjugated with PE/Cy7 under optimal conditions.

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

Workshop Number: VI B051

Concentration: Lot-specific



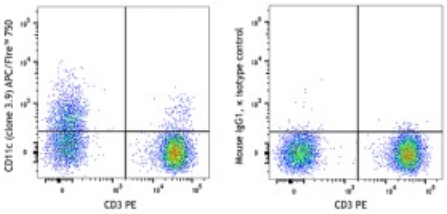
Human peripheral blood granulocytes stained with SE5A5 PE/Cy7

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. **Test size products are transitioning from 20 µl to 5 µl per test**. Please check your vial or your CoA to find the suggested use of this reagent per million cells in 100 µl staining volume or per 100 µl 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 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].



Human peripheral blood lymphocytes were stained with PE anti-human CD3 and APC/Fire™ 750 anti-human CD11c (clone 3.9) (left) or mouse IgG1, κ APC/Fire™ 750 isotype control (right).

For research use only. Not for diagnostic use. Not for resale. Sony Biotechnology Inc. will not be held responsible for patent infringement or other violations that may occur with the use of our products.

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 cells[2].

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. Immnuol.* 6:457.

For research use only. Not for diagnostic use. Not for resale. Sony Biotechnology Inc. will not be held responsible for patent infringement or other violations that may occur with the use of our products.