SONY

Product Data Sheet

Brilliant Violet 510™ anti-mouse CD172a (SIRPα)

Catalog # / Size: 1320160 / 50 µg

Clone: P84

Isotype: Rat IgG1, κ

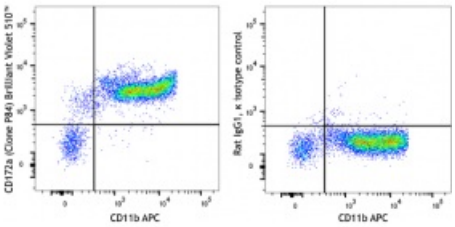
Immunogen: Mouse brain membrane protein

Reactivity: Mouse

Preparation: The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 510™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 510™ and unconjugated antibody.

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

Concentration: 0.2 mg/ml



C57BL/6 mouse bone marrow cells were stained with CD11b APC and CD172a (clone P84) Brilliant Violet 510™ (left) or rat IgG1, κ Brilliant Violet 510™ isotype control (right). Data shown was gated on myeloid cell population.

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 ≤0.5 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.

Brilliant Violet 510™ excites at 405 nm and emits at 510 nm. The bandpass filter 510/50 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel. Refer to your instrument manual or manufacturer for support. Brilliant Violet 510™ is a trademark of Sirigen Group Ltd.

Application Notes: Additional reported applications (for the relevant formats) include: blocking SIRPα interaction with CD47[4], *in vivo* blocking of dendritic cell migration[3], enhancing of macrophage phagocytosis[2,4], immunohistochemical staining of cerebellum frozen sections[1], and immunoprecipitation[2,4].

Application References:

1. Comu S, *et al.* 1997. *J. Neurosci.* 17:8702. (IHC)
2. Gresham HD, *et al.* 2000. *J. Exp. Med.* 191:515. (IP)
3. Fukunaga A, *et al.* 2004. *J. Immunol.* 172:4091. (Block)
4. Oldenborg PA, *et al.* 2000. *Science* 288:2051. (Block, IP)

Description: CD172a, also known as SIRPα, is a type I transmembrane protein with one V-set Ig-like and two C-set Ig-like domains in the extracellular portion, and two ITIM motifs and a proline-rich region in the cytoplasmic tail. CD172a is expressed by monocytes, macrophages, myeloid cells, and neuronal tissue. The phosphorylation of SIRPα ITIMs induces the recruitment and activation of the tyrosine phosphatases PTPN6 and PTPN11, resulting in the negative regulation of several biological processes. The ligands of CD172a are CD47, SP-A, and SP-D.

Antigen References:

1. Zhao XW, *et al.* 2011. *P. Natl. Acad. Sci. USA* 108:18342.
2. Verjan-Garcia N, *et al.* 2011. *J. Immunol.* 187:2268.
3. Sato-Hashimoto M, *et al.* 2011. *J. Immunol.* 187:291.
4. Raymond M, *et al.* 2010. *Eur. J. Immunol.* 40:3510.