SONY

Product Data Sheet

Brilliant Violet 605™ anti-human IL-4

Catalog # / Size: 3104140 / 100 tests
3104135 / 25 tests

Clone: MP4-25D2

Isotype: Rat IgG1, κ

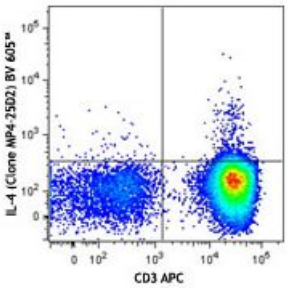
Immunogen: CHO-expressed, recombinant human IL-4

Reactivity: Human, Other

Preparation: The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 605™ under optimal conditions.

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

Concentration: Lot-specific



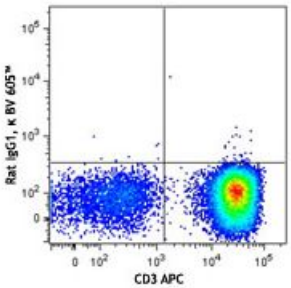
PMA+ ionomycin-stimulated human peripheral blood lymphocytes (6 hours, in the presence of monensin) were surface stained with CD3 APC, fixed, permeabilized and then stained with IL-4 (clone MP4-25D2) Brilliant Violet 605™ (top) or rat IgG1, κBrilliant Violet 605™ isotype control (bottom).

Applications:

Applications: Intracellular Staining for Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤5 µl per million cells or 5 µl per 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

Brilliant Violet 605™ excites at 405 nm and emits at 603 nm. The bandpass filter 610/20 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 605™ is a trademark of Sirigen Group Ltd.



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Application Notes:

Other Detection[1,3] or ELISPOT Detection[4,5]: The biotinylated MP4-25D2 antibody is useful as a detection antibody for a sandwich Other or ELISPOT assay, when used in conjunction with purified 8D4-8 antibody (Cat. No. 500702/500707) as the capture antibody.

Flow Cytometry[6,9]: The fluorochrome-labeled MP4-25D2 antibody is useful for intracellular immunofluorescent staining and flow cytometric analysis to identify IL-4 -producing cells within mixed cell populations.

Neutralization[1-3]: The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for neutralization of human IL-4 bioactivity (Cat. No. 500815). The MP4-25D2 antibody can neutralize the bioactivity of natural or recombinant IL-4.

Application References:

1. Chretien I, *et al.* 1989. *J. Immunol. Methods* 117:67. (Other Detection, Neut)
2. Ramanathan L, *et al.* 1993. *Biochem.* 32:3549. (Neut)
3. Abrams J, *et al.* 1992. *Immunol. Rev.* 127:5. (Other Detection, Neut)
4. Mahanty S, *et al.* 1992. *J. Immunol.* 148:3567. (ELISPOT Detection)
5. Klinman D, *et al.* 1994. *Curr. Prot. Immunol.* John Wiley and Sons New York. Unit 6.19. (ELISPOT Detection)
6. Prussin C, *et al.* 1995. *J. Immunol. Methods* 188:117. (ICFC)
7. Raqib R, *et al.* 1995. *Infect. Immun.* 63:289.
8. Andersson J, *et al.* 1994. *Immunology* 83:16.
9. Iwamoto S, *et al.* 2007. *J. Immunol.* 179:1449. (ICFC) PubMed
10. Kubota M, *et al.* 1997. *J. Immunol.* 158:5321.
11. Dzhagalov I, *et al.* 2007. *J. Immunol.* 178:2113. PubMed
12. Kroneke MA, *et al.* 2012. *J. Immunol.* 188:3734. PubMed

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Description:

IL-4 is a pleiotropic cytokine that is produced by activated T cells, mast cells, and basophils. IL-4 elicits many different biological responses but has two dominant functions. The first is regulating differentiation of naï ve $CD4^+$ T cell to the Th2 type. Th2 cells produce IL-4, IL-5, IL-10, and IL-13, which tend to favor a humoral immune response while suppressing a cell-mediated immune response controlled by Th1 cells. The second is regulating IgE and IgG1 production by B cells.

Antigen References:

1. Fitzgerald K, *et al.* Eds. 2001. The Cytokine FactsBook. Academic Press San Diego.
2. Boulay J, *et al.* 1992. *Curr. Opin. Immunol.* 4:294.
3. Dullens H, *et al.* 1991. *In vivo* 5:567.
4. Paul W. 1991. *Blood* 77:1859.

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