SONY

Product Data Sheet

Brilliant Violet 510™ anti-mouse IFN-γ

Catalog # / Size: 3129205 / 125 µl

Clone: XMG1.2

Isotype: Rat IgG1, κ

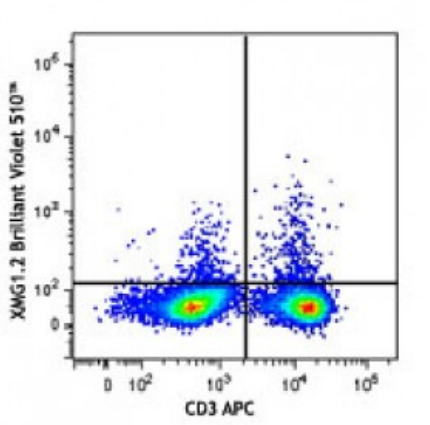
Immunogen: *E. coli*-expressed, recombinant mouse IFN-γ

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: Lot-specific



PMA+ionomycin-stimulated C57BL/6 mouse splenocytes (6 hours, in the presence of monensin) were surface stained with CD3 APC and then intracellularly stained with IFN-γ (clone XMG1.2) Brilliant Violet 510™.

Applications:

Applications: 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 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.

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: **ELISA[1-4,11,14] or ELISPOT5 Detection:** The biotinylated XMG1.2 antibody is useful as a detection antibody for a sandwich ELISA or ELISPOT assay, when used in conjunction with purified R4-6A2 antibody (Cat. No. 505702/505706) as the capture antibody and recombinant mouse IFN-γ (Cat. No. 575309) as the standard.
ELISA or ELISPOT Capture: The purified XMG1.2 antibody is useful as a capture antibody for a sandwich ELISA or ELISPOT assay, when used in conjunction with biotinylated R4-6A2 antibody (Cat. No. 505704) as the detection antibody and recombinant mouse IFN-γ (Cat. No. 575309) as the standard. The LEAF™ purified antibody is suggested for ELISPOT capture (Cat. No. 505812).

Flow Cytometry[7,8,12,13,16]: The fluorochrome-labeled XMG1.2 antibody is useful for intracellular immunofluorescent staining and flow cytometric analysis to identify IFN-γ-producing cells within mixed cell populations.

Neutralization[1-3,9,10]: The XMG1.2 antibody can neutralize the bioactivity of natural or recombinant IFN-γ. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for neutralization of mouse IFN-γ bioactivity *in vivo* and *in vitro* (Cat. No. 505812). For *in vivo* studies or highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 505834) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/microg).

Additional reported applications (for the relevant formats) include:

Western blotting, immunohistochemical staining of frozen tissue sections[6,22,23], and immunocytochemistry.

Note: For testing mouse IFN-γ in serum, plasma or supernatant, BioLegend's ELISA Max™ Sets (Cat. No. 430801 to 430806) are specially developed and recommended.

Application References:

1. Abrams J, *et al.* 1992. *Immunol. Rev.* 127:5. (ELISA, Neut)
2. Sander B, *et al.* 1993. *J. Immunol. Meth.* 166:201. (ELISA, Neut)
3. Abrams J, *et al.* 1995. *Curr. Prot. Immunol.* John Wiley and Sons, New York. Unit 6.20. (ELISA, Neut)
4. Yang X, *et al.* 1993. *J. Immunoassay* 14:129. (ELISA)
5. Klinman D, *et al.* 1994. *Curr. Prot. Immunol.* John Wiley and Sons, New York. Unit 6.19. (ELISPOT)
6. Sander B, *et al.* 1991. *Immunol. Rev.* 119:65. (IHC)
7. Ferrick D, *et al.* 1995. *Nature* 373:255. (FC)
8. Ko SY, *et al.* 2005. *J. Immunol.* 175:3309. (FC) PubMed
9. Peterson KE, *et al.* 2000. *J. Virol.* 74:5363. (Neut)
10. DeKrey GK, *et al.* 1998. *Infect. Immun.* 66:827. (Neut)
11. Dzhagalov I, *et al.* 2007. *J. Immunol.* 178:2113. (ELISA)
12. Lawson BR, *et al.* 2007. *J. Immunol.* 178:5366. (FC)
13. Lee JW, *et al.* 2006. *Nature Immunol.* 8:181. (FC) PubMed
14. Xu G, *et al.* 2007. *J. Immunol.* 179:5358. (ELISA) PubMed
15. Montfort M, *et al.*2004. *J. Immunol.* 173:4084. PubMed
16. Haring JS, *et al.* 2008. *J. Immunol.* 180:2855. (FC) PubMed
17. Jordan JM, *et al.* 2008. *Infect Immun.* 76:3717. PubMed
18. Tonkin DR, *et al.* 2008. *J. Immunol.* 181:4516. PubMed
19. Charles N, *et al.* 2010. *Nat. Med.* 16:701. (FC) PubMed
20. Cui Y, *et al.* 2009. *Invest. Ophth. Vis. Sci.* 50:5811. (FC) PubMed
21. Mykkanen OT, *et al.* 2014. *PLoS One.* 9:114790. PubMed
22. Yokogawa M, *et al*. 2013. *Mol. Carcinog*. 52:760. (IHC)
23. Mottram PL, *et al*. 1998. *J Immunol*. 161:602. (IHC)

Description:

IFN-γ is a potent multifunctional cytokine which is secreted primarily by activated NK cells and T cells. Originally characterized based on anti-viral activities, IFN-γ also exerts anti-proliferative, immunoregulatory, and proinflammatory activities. IFN-γ can upregulate MHC class I and II antigen expression by antigen-presenting cells.

Antigen References:

1. Fitzgerald K, *et al.* Eds. 2001. The Cytokine FactsBook. Academic Press, San Diego.
2. De Maeyer E, *et al.* 1992. *Curr. Opin. Immunol.* 4:321.
3. Farrar M, *et al.* 1993. *Annu. Rev. Immunol.* 11:571