SONY

Product Data Sheet

Brilliant Violet 711™ anti-mouse CD90.2

Catalog # / Size: 1126745 / 50 µg

Clone: 30-H12

Isotype: Rat IgG2b, κ

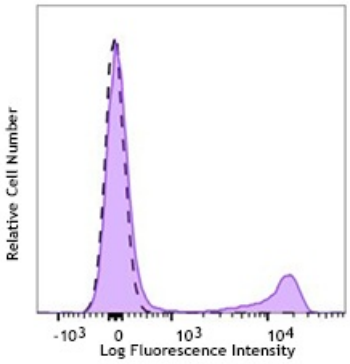
Immunogen: Mouse thymus or spleen

Reactivity: Mouse

Preparation: The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 711™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 711™ 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 splenocytes were stained with CD90.2 (clone 30-H12) Brilliant Violet 711™ (filled histogram) or rat IgG2b, κ Brilliant Violet 711™ 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 ≤ 0.03 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.

Brilliant Violet 711™ excites at 405 nm and emits at 711 nm. The bandpass filter 710/50 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 711™ is a trademark of Sirigen Group Ltd.

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Application Notes: Additional reported applications (for the relevant formats) include: *in vivo* and *in vitro* depletion[1,2,7], costimulation of CD3/TCR-mediated signal transduction[3,4], and immunohistochemical staining[5] of acetone-fixed frozen sections. The 30-H12 antibody does not react with Thy-1.1 alloantigen of the AKR/J and PL strains. To reduce non-specific binding to cells bearing Fc-receptors, pre-incubation of cells with anti-mouse CD16/CD32, clone 93 (Cat. No. 1106505/1106510) is recommended prior to immunofluorescent staining.

Application References:

1. Hathcock KS. 1991. Current Protocols in Immunology. 3.4.1. (Deplete)
2. Seaman WE. 1983. *J. Immunol.* 130:1713. (Deplete)
3. Nakashima I, *et al.* 1991. *J. Immunol.* 147:1153. (Costim)
4. Nakashima I, *et al.* 1993. *J. Immunol.* 151:3511. (Costim)
5. Ledbetter JA, *et al.* 1980. *J. Exp. Med.* 152:280. (IHC)
6. Hardy B, *et al.* 2005. *Int. Immunol.* 17:615.
7. Drobyski W, *et al.* 1996. *Blood* 87:5355. (Deplete)
8. Dyer KD, *et al.* 2007. *J. Immunol.* 179:1693. (FC) PubMed
9. Sungur CM, *et al.* 2013. *PNAS.* 110:7401. PubMed

Description: CD90.2 is a 25-35 kD immunoglobulin superfamily member also known as Thy1.2. It is expressed on hematopoietic stem cells and neurons, all thymocytes, and peripheral T cells in Thy1.2 bearing mouse strains (Balb/c, CBA/J, C3H/He, C57BL/-, DBA, NZB/-). CD90.2 is a glycosylphosphatidylinositol (GPI)-anchored membrane glycoprotein involved in signal transduction. CD90.2 is involved in costimulation of lymphocyte proliferation and induction of hematopoietic stem cells differentiation. CD90.2 has been shown to interact with CD45. The 30-H12 antibody has been reported to induce Ca^{2+} flux in thymocytes and, in combination with antibody against the CD3/TCR complex, promote thymocyte apoptosis and inhibit CD3-mediated proliferative responses of mature T lymphocytes.

Antigen References:

1. Barclay A, *et al.* 1997. The Leukocyte Antigen FactsBook Academic Press.
2. Craig W, *et al.* 1993. *J. Exp. Med.* 177:1331.
3. Reif AE and Schlesinger M. 1989. Cell Surface Antigen Thy-1.
4. Mayani H, *et al.* 1994. *Blood* 83:2410.