

Brilliant Violet 421™ anti-mouse CD90.2 (Thy1.2) Antibody

Catalog# / Size	105341 / 50 µg
Clone	30-H12
Regulatory Status	RUO
Other Names	Thy-1.2
Isotype	Rat IgG2b, κ
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.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Mouse thymus or spleen
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).
Preparation	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 421™ under optimal conditions.
Concentration	0.2 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
Recommended Usage	<p>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 ≤0.25 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>Brilliant Violet 421™ excites at 405 nm and emits at 421 nm. The standard bandpass filter 450/50 nm is recommended for detection. Brilliant Violet 421™ is a trademark of Sirigen Group Ltd.</p> <p>Learn more about Brilliant Violet™.</p> <p>This product is subject to proprietary rights of Sirigen Inc. and is made and sold under license from Sirigen Inc. The purchase of this product conveys to the buyer a non-transferable right to use the purchased product for research purposes only. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.</p>
Excitation Laser	Violet Laser (405 nm)
Application Notes	Additional reported applications (for the relevant formats) include: <i>in vivo</i> and <i>in vitro</i> 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. 101301 & 101302) is recommended prior

to immunofluorescent staining. The Ultra-LEAF™ purified antibody (Endotoxin <0.01 EU/μg, Azide-Free, 0.2 μm filtered) is recommended for functional assays (Cat. Nos. 105351 & 105352).

Application References

(PubMed link indicates BioLegend citation)

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](#)

Product Citations

1. Wang D, *et al.* 2018. *Immunity.* 48:659. [PubMed](#)
2. Dodagatta-Marri E, *et al.* 2021. *Cell Rep.* 36:109309. [PubMed](#)

RRID

AB_2632888 (BioLegend Cat. No. 105341)

Antigen Details

Structure	Ig superfamily, 25-35 kD
Distribution	Hematopoietic stem cells and neurons, all thymocytes, peripheral T cells of the Thy-1.2 bearing mice
Function	Lymphocyte costimulation, proliferation and differentiation of hematopoietic stem cells
Ligand/Receptor	CD45
Cell Type	Hematopoietic stem and progenitors, Neurons, T cells, Thymocytes
Biology Area	Immunology
Molecular Family	CD Molecules
Antigen References	<ol style="list-style-type: none">1. Barclay A, <i>et al.</i> 1997. <i>The Leukocyte Antigen FactsBook</i> Academic Press.2. Craig W, <i>et al.</i> 1993. <i>J. Exp. Med.</i> 177:1331.3. Reif AE and Schlesinger M. 1989. <i>Cell Surface Antigen Thy-1.</i>4. Mayani H, <i>et al.</i> 1994. <i>Blood</i> 83:2410.
Gene ID	21838

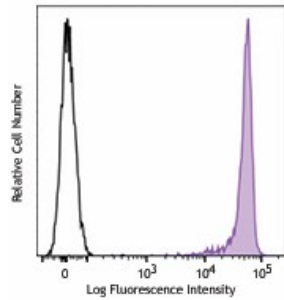
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Biotin anti-mouse CD90.2 (Thy1.2), FITC anti-mouse CD90.2 (Thy1.2), PE anti-mouse CD90.2 (Thy1.2), Purified anti-mouse CD90.2 (Thy1.2), APC anti-mouse CD90.2 (Thy1.2), PE/Cyanine5 anti-mouse CD90.2 (Thy1.2), Alexa Fluor® 488 anti-mouse CD90.2 (Thy1.2), Alexa Fluor® 647 anti-mouse CD90.2 (Thy1.2), Alexa Fluor® 700 anti-mouse CD90.2 (Thy1.2), PerCP anti-mouse CD90.2 (Thy1.2), Pacific Blue™ anti-mouse CD90.2 (Thy1.2), PE/Cyanine7 anti-mouse CD90.2 (Thy1.2), APC/Cyanine7 anti-mouse CD90.2 (Thy1.2), Brilliant Violet 570™ anti-mouse CD90.2 (Thy1.2), Brilliant Violet 785™ anti-mouse CD90.2 (Thy1.2), Purified anti-mouse CD90.2 (Thy1.2) (Maxpar® Ready), Brilliant Violet 510™ anti-mouse CD90.2 (Thy1.2), PerCP/Cyanine5.5 anti-mouse CD90.2 (Thy1.2), Brilliant Violet 605™ anti-mouse CD90.2 (Thy1.2), PE/Dazzle™ 594 anti-mouse CD90.2 (Thy1.2), Brilliant Violet 421™ anti-mouse CD90.2 (Thy1.2), TotalSeq™-A0075 anti-mouse CD90.2 (Thy1.2), APC/Fire™ 750 anti-mouse CD90.2 (Thy1.2), Brilliant Violet 711™ anti-mouse CD90.2 (Thy1.2), Ultra-LEAF™ Purified anti-mouse CD90.2 (Thy1.2), TotalSeq™-C0075 anti-mouse CD90.2 (Thy1.2), TotalSeq™-B0075 anti-mouse CD90.2 (Thy1.2), PE/Fire™ 810 anti-mouse CD90.2 (Thy1.2)

Product Data



C57BL/6 thymocytes were stained with CD90.2 (clone 30-H12) Brilliant Violet 421™ (filled histogram) or rat IgG2b, κ Brilliant Violet 421™ isotype control (open histogram).

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