

Alexa Fluor® 488 anti-mouse CD90.2

Catalog # / Size: 1126575 / 25 µg
1126580 / 100 µg

Clone: 30-H12

Isotype: Rat IgG2b, κ

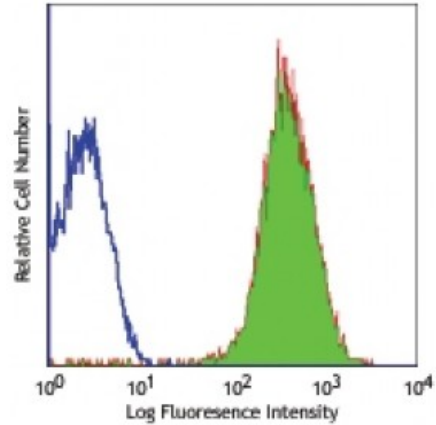
Immunogen: Mouse thymus or spleen

Reactivity: Mouse

Preparation: The antibody was purified by affinity chromatography, and conjugated with Alexa Fluor® 488 under optimal conditions.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Concentration: 0.5



C57BL/6 mouse thymocytes stained with 30-H12 Alexa Fluor® 488

Applications:

Applications: Immunofluorescence

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 ≤ 0.25 microg per 10⁶ cells in 100 microL volume. For immunohistochemical staining on frozen tissue sections, a concentration range of 5 - 10 microg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.

* Alexa Fluor® 488 has a maximum emission of 519 nm when it is excited at 488 nm.

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 staining⁵ 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 LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 105310).

- Application References:**
- Hathcock KS. 1991. *Current Protocols in Immunology*. 3.4.1. (Deplete)
 - Seaman WE. 1983. *J. Immunol.* 130:1713. (Deplete)
 - Nakashima I, *et al.* 1991. *J. Immunol.* 147:1153. (Costim)
 - Nakashima I, *et al.* 1993. *J. Immunol.* 151:3511. (Costim)
 - Ledbetter JA, *et al.* 1980. *J. Exp. Med.* 152:280. (IHC)
 - Hardy B, *et al.* 2005. *Int. Immunol.* 17:615.
 - Drobyski W, *et al.* 1996. *Blood* 87:5355. (Deplete)
 - Dyer KD, *et al.* 2007. *J. Immunol.* 179:1693. (FC) [PubMed](#)
 - Todd, EM., *et al.* 2011. *J. Immunol.* 187:3015. [PubMed.](#)
 - Fujishima K, *et al.* 2012. *Development.* 139:3442. [PubMed.](#)
 - Kretschmer S, *et al.* 2013. *PLoS One.* 8:e55201. [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 a*