

Product Datasheet

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Anti-Mouse CD90.2 (Thy 1.2) (Clone 30-H12) Purified *in vivo* GOLD™ Functional Grade Monoclonal Antibody

Product Information

Product No.: C393
Clone: 30-H12
RRID: AB_2737489
Isotype: Rat IgG2b κ
Storage: Sterile 2-8°C

Product Description

Specificity:

Clone 30-H12 recognizes the Thy-1.2 leukocyte marker.

Antigen Distribution:

CD90.2 is present on hematopoietic stem cells and neurons, all thymocytes, peripheral T cells of the Thy-1.2 bearing mice.

Background:

CD90 is a 28-30 kD GPI-linked membrane glycoprotein and is part of the Ig superfamily. It interacts with CD45 in signal transduction. CD90 mediates adhesion of thymocytes to thymic stroma. It has been reported that CD90 binds with $\beta 2$ and $\beta 3$ integrins and is involved in the inhibition of hematopoietic stem cells proliferation and differentiation, as well as the regulation of cell adhesion and neurite outgrowth. It can be used as a marker for various stem cells, such as hematopoietic stem cells, and for the axonal processes of mature neurons. For use in FACS, CD90 is a popular surface marker for stem cells in combination with other markers such as CD34. There are two alleles for CD90 in mice that differ by one amino acid. The difference being that CD90.1 (Thy1.1) has an arginine and CD90.2 (Thy1.2) has a glutamine at position 108. CD90.2 is more prevalent and is expressed in most mice strains. CD90.1 is only expressed by a select few mice strains including AKR/J and PL strains. CD90.2 is a 25-35 kD GPI-anchored membrane glycoprotein. Like CD90, it is also in the Ig superfamily, interacts with CD45, and has involvement in signal transduction. The function of CD90.2 is thought to play roles in cognition, axon growth, T lymphocyte function, and apoptosis. CD90 acts as tumor suppressor for some tumors due to its action in upregulating thrombospondin, SPARC (osteonectin), and fibronectin. On the other hand, it has been suspected to aid in the spread of circulating melanoma cells. Regarding prostate cancer, CD90 has therapeutic potential for specific drug targeting due to its expression in cancer associated stroma, but not in normal stroma.

Known Reactivity Species:

Mouse

Format:

in vivo GOLD™, Purified *in vivo* Functional Grade

Immunogen:

Mouse thymus or spleen

Formulation

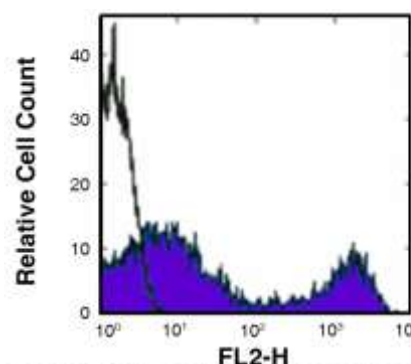
This monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.

Purity

≥95% monomer by analytical SEC, >95% by SDS Page

Endotoxin

< 1.0 EU/mg as determined by the LAL method



Surface staining of mouse splenocytes with Anti-Mouse CD90-RPE (Thy 1.2) Clone 30-H12 (purple histogram) or staining buffer to show autofluorescence (open histogram).

Products are for research use only. Not for use in diagnostic or therapeutic procedures.

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Storage and Stability

Functional grade preclinical antibodies may be stored sterile as received at 2-8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at $\leq -70^{\circ}\text{C}$. **Avoid Repeated Freeze Thaw Cycles.**

Product Preparation

Functional grade preclinical antibodies are manufactured in an animal free facility using *in vitro* cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates.

Applications

Applications and Recommended Usage (Quality Tested By Leinco):

FC The suggested concentration for this 30-H12 antibody for staining cells in flow cytometry is $\leq 0.25\ \mu\text{g}$ per 10^6 cells in a volume of 100 μl or 100 μl of whole blood. Titration of the reagent is recommended for optimal performance for each application.

WB The suggested concentration for this 30-H12 antibody for use in western blotting is 1-10 $\mu\text{g/ml}$.

Other Applications Reported in Literature:

CODEX®

CyTOF®

IHC (Frozen)

Costim

Depletion

Country of Origin

USA

References

1. Ledbetter, J. and Herzenberg, L. (1979) *Immunol. Rev.* **47**:63
2. Unkeless, JC. (1979) *J. Exp. Med.* **150**:580

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