

Mouse/Rat CD90.1 (Thy-1.1) Antibody

Purified in vivo GOLD™ Functional Grade

Monoclonal Antibody

Product Information

Product No.: C851
Clone: OX-7
Isotype: Mouse IgG1
Storage: Sterile 2° to 8°C

Product Description

Specificity:

Clone OX-7 activity is directed against both rat and murine CD90/Thy-1.

Antigen Distribution:

CD90 is present on a variety of cell types in murine and rat, including lymphatic vessels¹, T cells², neurons³ and fibroblasts⁴.

Background:

CD90/Thy-1 (murine CD90.1/Thy-1.1) is a cell surface glycoprotein that was the first protein of the immunoglobulin superfamily to be discovered⁵. The 25 kDa core protein is N-glycosylated at three sites, leading to isoforms with a range of molecular masses (25-37 kDa). CD90 is composed of a single V-like immunoglobulin domain anchored by a disulfide bond between Cys 28 and Cys 104. Despite its lack of an intracellular domain, CD90 is located in the outer leaflet of lipid rafts at the cell membrane, allowing signaling functions by cis- and trans-interactions with a variety of proteins, including G inhibitory proteins, the Src family kinase (SFK) members src and c-fyn, and tubulin.

CD90 has been found to play a role in numerous cellular activities, such as cell adhesion, apoptosis, metastasis, inflammation, and fibrosis. In mouse strains expressing CD90.1, it is expressed on early-stage hematopoietic cells in bone marrow, thymocytes, and circulating mature T cells. The OX-7 antibody has been reported to induce leukocyte activation, glomerular nephritis, apoptosis in glomerular mesangial cells, and vascular permeability. CD90 can be used as a marker for a variety of stem cells and for the axonal processes of mature neurons. Diseases associated with CD90 dysfunction include nasopharyngeal carcinoma and thymoma.

Known Reactivity Species:

Mouse, Rat

Format:

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Immunogen:

Rat thymocyte Thy-1 antigen

Formulation

This monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.0-7.5, 0.005% pS80 stabilizing buffer, 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/μg as determined by the LAL method

Storage and Stability

Functional grade preclinical antibodies may be stored sterile as received at 2° to 8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at ≤ -70°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.

Other Applications Reported in Literature:

FC

IF

FA

IHC

Country of Origin

USA

References

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- 3) Schrader JW, Battye F, Scollay R. Proc Natl Acad Sci. U S A 79: 4161–4165. 1982.
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- 5) Hu P, Leyton L, Hagood JS, Barker TH. Front Cell Dev Biol. Jun 6;10:928510. 2022.
- 6) Crook K, Hunt SV. Dev Immunol. 4(4):235-46. 1996.
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- 8) Hermans MH, Opstelten D. J Histochem Cytochem. Dec;39(12):1627-34. 1991