abcam

ab33694

PE Anti-CD90 / Thy1 antibody [MRC OX-7]

Anti-CD90 / Thy1 antibody [MRC OX-7] conjugated to PE - suitable for flow cytometry, and reacts with mouse and rat samples. Clone [MRC OX-7] is a mouse monoclonal antibody cited in 73 publications.

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Lab Essentials

Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	pH: 7.2 Preservative: 0.09% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	MRC OX-7
Purification technique	Affinity purification Protein G
Specificity	Since CD90 is a monomorphic determinant in rat but polymorphic in mice, clone MRC OX-7 reacts with Thy1.1 mice e.g. AKR and FVB mice, but not Thy1.2 mice such as CBA and BALB/c. The affinity of the Fab' of MRC OX-7 for rat Thy1 is 3 x 109m-1 and for mouse Thy1.1 is 3 x 108m-1

Reactivity data

Flow Cyt

Tested

Species	Rat
Dilution info	-
Notes	or 100ul whole blood. ab91357 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse
Dilution info	-
Notes	or 100ul whole blood. ab91357 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target data

See full target information Thy1

Function	May play a role in cell-cell or cell-ligand interactions during synaptogenesis and other events in the brain.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab33694 has been demonstrated to promote neurite outgrowths on peripherin-stained sympathetic rat neurons, using fluorescence microscopy.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	CD90 also known as Thy1 is a glycoprotein with a molecular mass of approximately 25-37 kDa. It is highly conserved across species and found on the surface of various cell types including fibroblasts neurons and endothelial cells. CD90 is expressed in these cells in tissues such as the brain thymus and lungs. Researchers use anti-CD90 antibodies for detection often in combination with CD90 FITC in immunofluorescence assays. CD90 serves as a useful cell marker particularly in identifying mesenchymal stem cells (MSCs).
Biological function summary	CD90 plays a role in cell-cell and cell-matrix interactions contributing to cellular adhesion migration and signal transduction. It functions as part of a complex involving integrins which mediate its interaction with the extracellular matrix. This protein also influences T-cell activation reflecting its importance in immune response regulation. Its presence aids in modulating response to injury and promoting tissue repair due to its association with stem and progenitor cells.
Pathways	CD90 engagement affects focal adhesion and MAPK signaling pathways. It interacts with integrins like αvβ3 and α5β1 influencing cell movement and proliferation processes. CD90 involvement in these pathways allows it to regulate responses important for cell survival and communication within various tissues. These interactions highlight the protein's role in maintaining cellular homeostasis and regulating physiological processes.
Associated diseases and disorders	CD90 has associations with fibrosis and cancer. In fibrotic conditions CD90 expression affects fibroblast activity influencing tissue scarring in organs such as the liver and lungs. In cancer CD90 modifies tumor progression and metastasis by impacting cell adhesion and migration with connections to proteins like TGF-beta which further drive these processes. Understanding CD90 in disease contexts facilitates the development of therapeutic strategies aimed at modulating its activity.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

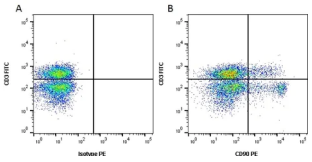
We do not recommend this combination. It is not covered by our product promise.

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1 product image



Flow Cytometry - PE Anti-CD90 / Thy1 antibody [MRC OX-7] (ab33694)

CD90 / Thy1 Flow Cytometry staining of Red cell lysed rat blood using mouse Anti-CD90 / Thy1 antibody

Flow cytometry staining of red cell lysed rat blood with ab33694.
Figure A. FITC conjugated Mouse anti Rat CD3 and PE conjugated Mouse IgG1 isotype control.
Figure B. FITC conjugated Mouse anti Rat CD3 and PE conjugated Mouse anti Rat CD90 (ab33694).

All experiments performed on red cell lysed rat blood gated on lymphoid cells in the presence of 10% rat serum (10ul neat to label $1x10^6$ cells in 100ul).

Data acquired on the ZE5 Cell Analyzer.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.