

## Technical Data Sheet

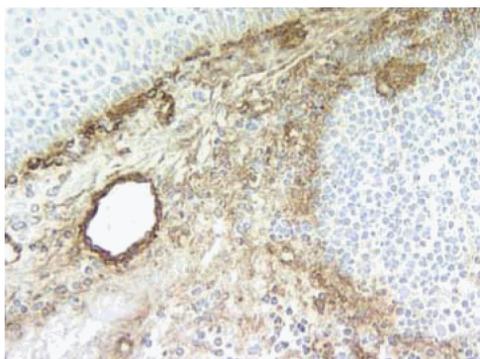
## Purified Mouse Anti-Human CD90

## Product Information

<b>Material Number:</b>	<b>550402</b>
<b>Alternate Name:</b>	THY1; Thy-1 antigen; Thy-1 membrane glycoprotein
<b>Size:</b>	1.0 ml
<b>Concentration:</b>	62.5 µg/ml
<b>Clone:</b>	5E10
<b>Isotype:</b>	Mouse IgG1, κ
<b>Reactivity:</b>	QC Testing: Human Tested in Development: Baboon, Rhesus, Cynomolgus, Pig, and Dog
<b>Workshop:</b>	V M07
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA, goat serum, and ≤0.09% sodium azide.

## Description

The 5E10 monoclonal antibody specifically binds to human CD90. CD90 is a 25-35 kDa molecule expressed on 1-4% of human fetal liver cells, cord blood cells, and bone marrow cells. Anti-CD90 reacts with a subset of immature, CD34+ cells and a distinct subset of mature CD34- cells that are CD3+CD4+. The CD90+CD34+ population is highly enriched for cells capable of long-term culture. Anti-CD90 is useful for enriching high proliferative potential colony-forming cells (HIPP-CFC) which are primitive progenitor cells.



*Immunohistochemical staining of CD90+ cells. Frozen section of normal human tonsil was reacted with the 5E10 antibody. Cells positive for CD90 can be identified by the brown labeling of their cell membranes. Amplification 20X.*

## Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

## Application Notes

## Application

Flow cytometry	Routinely Tested
Immunohistochemistry-frozen	Tested During Development
Immunohistochemistry-zinc-fixed	Tested During Development
Immunohistochemistry-paraffin	Not Recommended

## Recommended Assay Procedure:

**Immunohistochemistry:** The 5E10 clone reactive against human CD90 is recommended to test for immunohistochemical staining of acetone-fixed frozen sections. Tissues tested were human spleen and tonsil. The antibody stains endothelial cells, haematopoietic cells, stem cells and T cell precursors. The isotype control recommended for use with this antibody is purified mouse IgG1 (Cat. No. 550878). For optimal indirect immunohistochemical staining, the 5E10 antibody should be titrated (1:10 to 1:50 dilution) and visualized via a three-step staining procedure in combination with polyclonal, biotin conjugated anti-mouse Igs (multiple adsorbed) (Cat. No. 550337) as the secondary antibody and Streptavidin-HRP (Cat. No. 550946) together with the DAB detection system (Cat. No. 550880). A detailed protocol of the immunohistochemical procedure is available on our website at [www.bdbiosciences.com/support/resources](http://www.bdbiosciences.com/support/resources). The clone 5E10 is not recommended for formalin-fixed paraffin embedded sections.

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## Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
550337	Biotin Goat Anti-Mouse Ig (Multiple Adsorption)	1.0 ml	Polyclonal
550946	Streptavidin HRP	50 ml	(none)
550880	DAB Substrate Kit	500 tests	(none)
551011	Anti-Mouse Ig HRP Detection Kit	200 tests	(none)
550878	Purified Mouse IgG1 $\kappa$ Isotype Control	1.0 ml	MOPC-31C
559148	Antibody Diluent for IHC	125 ml	(none)

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. An isotype control should be used at the same concentration as the antibody of interest.
5. This antibody has been developed for the immunohistochemistry application. However, a routine immunohistochemistry test is not performed on every lot. Researchers are encouraged to titrate the reagent for optimal performance.
6. Please refer to [www.bdbiosciences.com/pharming/protocols](http://www.bdbiosciences.com/pharming/protocols) for technical protocols.

## References

Baum CM, Weissman IL, Tsukamoto AS, Buckle AM, Peault B. Isolation of a candidate human hematopoietic stem-cell population. *Proc Natl Acad Sci U S A*. 1992; 89(7):2804-2808. (Biology)

Craig W, Kay R, Cutler RL, Lansdorp PM. Expression of Thy-1 on human hematopoietic progenitor cells. *J Exp Med*. 1993; 177(5):1331-1342. (Biology)

Knapp W, Dorken B, Rieber EP, et al, ed. *Leucocyte Typing IV*. New York: Oxford University Press; 1989:1-1208. (Biology)

Lansdorp PM, Thomas TE, AP Gee, ed. *Bone Marrow Processing and Purging*. Boca Raton FL: CRC Press; 1991. (Biology)

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