

Technical Data Sheet

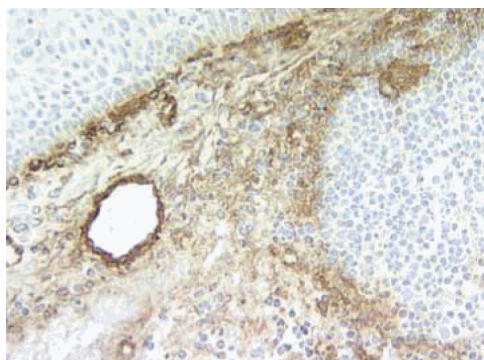
Purified Mouse Anti-Human CD90**Product Information**

Material Number:	550402
Alternate Name:	Thy-1
Size:	1.0 ml
Clone:	5E10
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human Tested in Development: Baboon, Rhesus, Cynomolgus, Pig, and Dog
Workshop:	V M07
Storage Buffer:	Aqueous buffered solution containing BSA, goat serum, and $\leq 0.09\%$ sodium azide.

Description

Reacts with 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.

This antibody is routinely tested by immunohistochemical analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Immunohistochemical staining of CD90+ cells. Frozen sections 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

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

Store undiluted at 4° C.

Application Notes**Application**

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

Recommended Assay Procedure:

Immunohistochemistry: The 5E10 clone reactive against human CD90 is tested for immunohistochemical staining of acetone-fixed frozen sections. Tissue tested was 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

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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/pharmingen/protocols. The clone 5E10 is not recommended for formalin-fixed paraffin embedded sections.

Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
551011	Anti-Mouse Ig HRP Detection Kit	200 tests	(none)
550880	DAB Substrate Kit	500 tests	(none)
550946	Streptavidin HRP	50 ml	(none)
550337	Biotin Goat Anti-Mouse Igs	1.0 ml	Polyclonal
550878	Purified Mouse IgG1 κ Isotype Control	1.0 ml	MOPC-31C

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. 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.

References

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- 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)
- AP Gee, ed. *Bone Marrow Processing and Purgine*. Boca Raton FL: CRC Press; 1991.(Biology)