

**Biotin anti-human CD90 (Thy1)**

**Catalog # / Size:** 2240530 / 100 µg

**Clone:** 5E10

**Isotype:** Mouse IgG1, κ

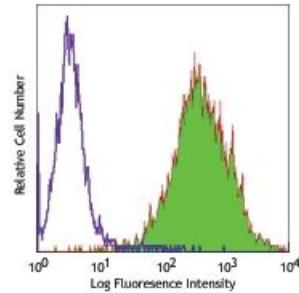
**Immunogen:** HEL cells

**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions. The solution is free of unconjugated biotin.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

**Concentration:** 0.5



Human erythroleukemic cell line (HEL) stained with biotinylated 5E10, followed by Sav-PE

**Applications:**

**Applications:** Flow Cytometry, Immunohistochemistry

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤0.5 microg per million cells in 100 microl volume. It is recommended that the reagent be titrated for optimal performance for each application.

**Application Notes:** Clone 5E10 recognizes an epitope on Thy-1 independent of its glycosylation, but is abolished under reducing conditions.<sup>4</sup> Additional reported (for the relevant formats) applications include: immunohistochemical staining of acetone-fixed frozen sections, immunoprecipitation<sup>1</sup>, and immunofluorescence<sup>3</sup>.

**Application References:**

1. Craig W, *et al.* 1993. *J. Exp. Med.* 177:1331. (IP)
2. Gundlach CW 4th, *et al.* 2011. *Bioconjug. Chem.* 22:1706. (Pig Reactivity)
3. Touboul C, *et al.* 2013. *J. Transl. Med.* 11:28. (IF)
4. Bradley JE, *et al.* 2013. *Lab Invest.* 93:365. (Epitope)
5. Donnenberg VS, *et al.* 2010. *Cytometry B. Clin. Cytom.* 5:287. (IHC)

**Description:** CD90 is a 25-35 kD GPI-anchored protein, also known as Thy-1. It belongs to the Ig superfamily. Human CD90 is expressed on neuronal cells, a subset of CD34<sup>+</sup> cells, a subset of fetal liver cells and fetal thymocytes, fibroblasts, activated endothelial cells, and some leukemia cell lines. CD34<sup>+</sup>CD90<sup>+</sup> cells are primitive hematopoietic stem cells. It has been reported that Thy-1 binds with β2 and β3 integrins and plays bimodal roles in the regulation of cell adhesion and neurite outgrowth, and inhibits hematopoietic stem cells proliferation and differentiation.

**Antigen References:**

1. McKenzie JL, *et al.* 1981. *J. Immunol.* 126:843.
2. Avalos AM, *et al.* 2002. *Biol. Res.* 35:231.
3. Wetzel A, *et al.* 2004. *J. Immunol.* 172:3850.