

Purified anti-human CD90 (Thy1) Antibody

Catalog# / Size	328101 / 25 µg 328102 / 100 µg
Clone	5E10
Regulatory Status	RUO
Workshop	HCDM listed
Other Names	Thy-1, Thy1
Isotype	Mouse IgG1, κ
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 ⁺ cells, a subset of fetal liver cells and fetal thymocytes, fibroblasts, activated endothelial cells, and some leukemia cell lines. CD34 ⁺ CD90 ⁺ 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.

Product Details

Verified Reactivity	Human
Reported Reactivity	African Green, Baboon, Cynomolgus, Pigtailed Macaque, Rhesus, Pig
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	HEL cells
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	FC - Quality tested CyTOF® - Verified IHC-F, ICC, IP - Reported in the literature, not verified in house
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 µg per million cells in 100 µl 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. ⁴ Additional reported (for the relevant formats) applications include: immunohistochemical staining of acetone-fixed frozen sections, immunoprecipitation ¹ , and immunofluorescence ³ .
Application References	1. Craig W, <i>et al.</i> 1993. <i>J. Exp. Med.</i> 177:1331. (IP) 2. Gundlach CW 4th, <i>et al.</i> 2011. <i>Bioconjug. Chem.</i> 22:1706. (Pig Reactivity) 3. Touboul C, <i>et al.</i> 2013. <i>J. Transl. Med.</i> 11:28. (IF) 4. Bradley JE, <i>et al.</i> 2013. <i>Lab Invest.</i> 93:365. (Epitope) 5. Donnenberg VS, <i>et al.</i> 2010. <i>Cytometry B. Clin. Cytom.</i> 5:287. (IHC)
(PubMed link indicates BioLegend citation)	
Product Citations	1. Mendt M, <i>et al.</i> 2018. <i>JCI Insight.</i> 9:1523. PubMed 2. Tornack J, <i>et al.</i> 2017. <i>PLoS One.</i> 12:e0169119. PubMed 3. Slamecka J, <i>et al.</i> 2017. <i>Cell Cycle.</i> 17:330. PubMed 4. Floy ME, <i>et al.</i> 2022. <i>STAR Protoc.</i> 3:101275. PubMed

5. Fitzgerald W, *et al.* 2018. Am J Reprod Immunol. 80:e12860. [PubMed](#)
6. Azari S, *et al.* 2021. MBio. 12:e0184921. [PubMed](#)
7. Gañán-Gómez I, *et al.* 2022. Nat Med. . [PubMed](#)
8. Lin J, *et al.* 2019. J Immunol Res. 2019:6929286. [PubMed](#)
9. Han L, *et al.* 2019. Haematologica. 10.3324/haematol.2018.205534. [PubMed](#)
10. Kennedy-Darling J, *et al.* 2021. Eur J Immunol. 51:1262. [PubMed](#)
11. Ran LJ, *et al.* 2018. Mol Med Rep. 18:723. [PubMed](#)
12. Crawford LB, *et al.* 2021. J Virol. 95:. [PubMed](#)
13. Li Z, *et al.* 2020. J Clin Lab Anal. 34:e23155. [PubMed](#)

RRID AB_940390 (BioLegend Cat. No. 328101)
 AB_940393 (BioLegend Cat. No. 328102)

Antigen Details

Structure	25-35 kD glycoprotein, Ig superfamily
Distribution	Subset of CD34 ⁺ hematopoietic stem cells, subset of fetal thymocytes, subset of fetal liver cells, fibroblast, activated endothelial cells, neurons and some leukemia cell lines
Function	Regulate hematopoiesis and neural cell growth, cell adhesion
Ligand/Receptor	β3 integrin, β2 integrin
Cell Type	Endothelial cells, Fibroblasts, Hematopoietic stem and progenitors, Leukemia, Mesenchymal Stem Cells, Neurons, Thymocytes
Biology Area	Immunology, Stem Cells
Molecular Family	CD Molecules
Antigen References	<ol style="list-style-type: none"> 1. McKenzie JL, <i>et al.</i> 1981. <i>J. Immunol.</i> 126:843. 2. Avalos AM, <i>et al.</i> 2002. <i>Biol. Res.</i> 35:231. 3. Wetzel A, <i>et al.</i> 2004. <i>J. Immunol.</i> 172:3850.
Gene ID	7070

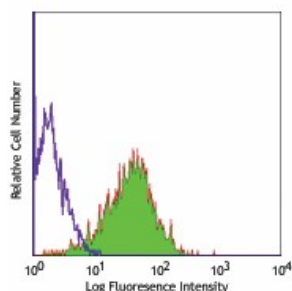
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

PE/Cyanine7 anti-human CD90 (Thy1), Purified anti-human CD90 (Thy1), Biotin anti-human CD90 (Thy1), FITC anti-human CD90 (Thy1), PE anti-human CD90 (Thy1), PE/Cyanine5 anti-human CD90 (Thy1), APC anti-human CD90 (Thy1), Alexa Fluor® 647 anti-human CD90 (Thy1), PerCP/Cyanine5.5 anti-human CD90 (Thy1), Alexa Fluor® 700 anti-human CD90 (Thy1), Brilliant Violet 421™ anti-human CD90 (Thy1), Brilliant Violet 510™ anti-human CD90 (Thy1), Brilliant Violet 605™ anti-human CD90 (Thy1), Purified anti-human CD90 (Thy1) (Maxpar® Ready), APC/Cyanine7 anti-human CD90 (Thy1), PE/Dazzle™ 594 anti-human CD90 (Thy1), APC/Fire™ 750 anti-human CD90 (Thy1), Brilliant Violet 711™ anti-human CD90 (Thy1), TotalSeq™-A0060 anti-human CD90 (Thy1), Brilliant Violet 785™ anti-human CD90 (Thy1), Brilliant Violet 650™ anti-human CD90 (Thy1), TotalSeq™-C0060 anti-human CD90 (Thy1), TotalSeq™-B0060 anti-human CD90 (Thy1), TotalSeq™-D0060 anti-human CD90 (Thy1)

Product Data



Human erythroleukemic cell line HEL stained with purified 5E10, followed by anti-mouse IgG FITC

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, www.biolegend.com/ordering#license). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587