

## Alexa Fluor<sup>®</sup> 700 anti-human CD90 (Thy1) Antibody

<b>Catalog# / Size</b>	328119 / 25 µg 328120 / 100 µg
<b>Clone</b>	5E10
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	HCDM listed
<b>Other Names</b>	Thy-1, Thy1
<b>Isotype</b>	Mouse IgG1, κ
<b>Description</b>	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.

### Product Details

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<b>Verified Reactivity</b>	Human
<b>Reported Reactivity</b>	African Green, Baboon, Cynomolgus, Pigtailed Macaque, Rhesus, Pig
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	HEL cells
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor <sup>®</sup> 700 under optimal conditions.
<b>Concentration</b>	0.5 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . The suggested use of this reagent is ≤ 2.0 µg per 10 <sup>6</sup> cells in 100 µl volume or 100 µl of whole blood. It is highly recommended that the reagent be titrated for optimal performance for each application.  * Alexa Fluor <sup>®</sup> 700 has a maximum emission of 719 nm when it is excited at 633nm / 635nm. Prior to using Alexa Fluor <sup>®</sup> 700 conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.  Alexa Fluor <sup>®</sup> and Pacific Blue™ are trademarks of Life Technologies Corporation.  <a href="#">View full statement regarding label licenses</a>
<b>Excitation Laser</b>	Red Laser (633 nm)
<b>Application Notes</b>	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> .
<b>Application References</b>	1. Craig W, <i>et al.</i> 1993. <i>J. Exp. Med.</i> 177:1331. (IP)

(PubMed link indicates BioLegend citation)

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)

#### Product Citations

1. James JL, *et al.* 2021. *Cartilage.* 13:544S. [PubMed](#)
2. Mian S, *et al.* 2015. *Nat Commun.* 6: 10004. [PubMed](#)
3. Marquez-Curtis LA, *et al.* 2022. *PLoS One.* 17:e0263005. [PubMed](#)
4. Amoah A, *et al.* 2021. *Haematologica.* Online ahead of print. [PubMed](#)
5. Jung J, *et al.* 2019. *Cell Rep.* 26:1906. [PubMed](#)
6. Felker S, *et al.* 2022. *JCI Insight.* 7: . [PubMed](#)
7. Li Y, *et al.* 2020. *Front Cell Dev Biol.* 8:604021. [PubMed](#)
8. Henson F, *et al.* 2021. *J Orthop Res.* 39:1411. [PubMed](#)
9. Cytlak U, *et al.* 2020. *Immunity.* 53(2):353-370. [PubMed](#)
10. Niehage C, *et al.* 2011. *PLoS One.* 6:e20399. [PubMed](#)

#### RRID

AB\_2203303 (BioLegend Cat. No. 328119)  
AB\_2203302 (BioLegend Cat. No. 328120)

## Antigen Details

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

## Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

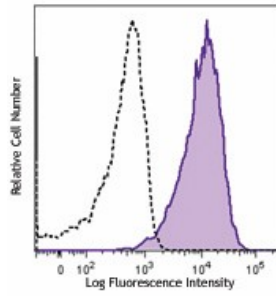
## Other Formats

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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

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Human erythroleukemic cell line (HEL) were stained with CD90 (clone 5E10) Alexa Fluor® 700 (filled histogram) or mouse IgG1, κ Alexa Fluor® 700 isotype control (open histogram).

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