

Anti-Human CD90 Antibody, Clone 5E10, APC



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Antibodies

Mouse monoclonal IgG1 antibody
against human, rhesus, cynomolgus
CD90 (Thy-1), APC-conjugated

Catalog #60045AZ
#60045AZ.1

100 Tests 5 µL/test
25 Tests 5 µL/test

Product Description

The 5E10 antibody reacts with CD90 (Thy-1), a GPI-linked membrane glycoprotein that is N-glycosylated at two sites, giving rise to 25 - 37 kDa molecules. CD90 has roles in signal transduction, cell adhesion and migration, neurite outgrowth, T cell activation, tumor suppression, and inhibition of the proliferation and differentiation of hematopoietic stem cells. It is a known ligand of $\beta 2$ and $\beta 3$ integrins and upregulates synthesis of fibronectin, osteonectin, and thrombospondin. CD90 is broadly expressed, being found on human thymocytes, neurons, some glial cells, fibroblasts, activated endothelial cells, some leukemia cell lines, and a distinct subset (< 1%) of CD3+CD4+ T cells in human peripheral blood. CD90 is also expressed by small subsets of CD34+ cells in fetal liver, umbilical cord blood, bone marrow, and mobilized peripheral blood cells. CD90 is considered an important marker for hematopoietic stem and progenitor cells and, in combination with other markers such as CD34, is useful for identifying and isolating these cells by FACS.

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|----------------------|--|
| Target Antigen Name: | CD90 (Thy-1) |
| Alternative Names: | CDw90, Thy-1, Thy1 |
| Gene ID: | 7070 |
| Species Reactivity: | Human, Rhesus, Cynomolgus, Baboon, Pigtailed Macaque, Dog, Pig |
| Host Species: | Mouse (BALB/c) |
| Clonality: | Monoclonal |
| Clone: | 5E10 |
| Isotype: | IgG1, kappa |
| Immunogen: | Human HEL erythroleukemia cell line |
| Conjugate: | APC (Allophycocyanin) |

Applications

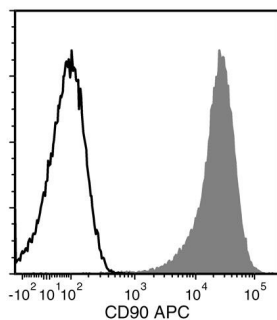
| | |
|-----------------------|---|
| Verified: | FC |
| Reported: | FC |
| Special Applications: | This antibody clone has been verified for labeling human mesenchymal cells grown in MesenCult™ Proliferation Kit (Human; Catalog #05411). |

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

| | |
|------------------------|---|
| Formulation: | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) bovine serum albumin |
| Purification: | The antibody was purified by affinity chromatography and conjugated with APC under optimal conditions. The solution is free of unconjugated APC. |
| Stability and Storage: | Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com . |
| Directions for Use: | For flow cytometry the suggested use of this antibody is $\leq 5 \mu\text{L}$ per 1×10^6 cells in 100 μL or per 100 μL of whole blood. It is recommended that the antibody be titrated for optimal performance for each application. |

Data



Flow cytometry analysis of human erythroleukemia (HEL) cells labeled with Anti-Human CD90 Antibody, Clone 5E10, APC (filled histogram) or a mouse IgG1, kappa isotype control antibody, APC (solid line histogram).

Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

1. Schinke C et al. (2015) IL8-CXCR2 pathway inhibition as a therapeutic strategy against MDS and AML stem cells. *Blood* 125(20): 3144–52. (FACS)
2. Soler Palacios B et al. (2015) Macrophages from the synovium of active rheumatoid arthritis exhibit an activin A-dependent pro-inflammatory profile. *J Pathol* 235(3): 515–26. (IF, IHC)
3. Park S-J et al. (2014) Interaction of mesenchymal stem cells with fibroblast-like synoviocytes via cadherin-11 promotes angiogenesis by enhanced secretion of placental growth factor. *J Immunol* 192(7): 3003–10. (FC)
4. Touboul C et al. (2013) Mesenchymal stem cells enhance ovarian cancer cell infiltration through IL6 secretion in an amniochorionic membrane based 3D model. *J Transl Med* 11: 28. (FACS, IF)
5. Gundlach CW et al. (2011) Synthesis and evaluation of an anti-MLC1 x anti-CD90 bispecific antibody for targeting and retaining bone-marrow-derived multipotent stromal cells in infarcted myocardium. *Bioconjug Chem* 22(8): 1706–14. (ELISA, FA, FC, WB)
6. Donnenberg VS et al. (2010) Localization of CD44 and CD90 positive cells to the invasive front of breast tumors. *Cytometry B Clin Cytom* 78(5): 287–301. (IF, IHC)
7. Hung JT et al. (2005) Immunopathogenic role of TH1 cells in autoimmune diabetes: evidence from a T1 and T2 doubly transgenic non-obese diabetic mouse model. *J Autoimmun* 25(3):181–92. (IHC, FC)
8. Mason D et al. (Eds.). (2002) *Leukocyte Typing VII: White cell differentiation antigens* (pp. 836). Oxford, UK: Oxford University Press.
9. Murray LJ et al. (1996) CD34+Thy-1+Lin- stem cells from mobilized peripheral blood. *Leuk Lymphoma* 22(1-2): 37–42. (FC)
10. Holden JT et al. (1995) Characterization of Thy-1 (CDw90) expression in CD34+ acute leukemia. *Blood* 86(1): 60–5.
11. Mayani H & Lansdorp PM. (1994) Thy-1 expression is linked to functional properties of primitive hematopoietic progenitor cells from human umbilical cord blood. *Blood* 83(9): 2410–7. (FC)
12. Craig W et al. (1993) Expression of Thy-1 on human hematopoietic progenitor cells. *J Exp Med* 177(5): 1331–42. (FC, IP, WB)

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