Antibodies

Anti-Human CD90 Antibody, Clone 5E10, FITC

Mouse monoclonal IgG1 antibody against human, rhesus, cynomolgus CD90, FITC-conjugated

100 tests

Catalog #60045FI

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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 ß2 and ß3 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 to identify and isolate these cells by FACS.

Target Antigen Name:	CD90
Alternative Names:	Thy-1, Thy1, CDw90
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:	FITC

Applications

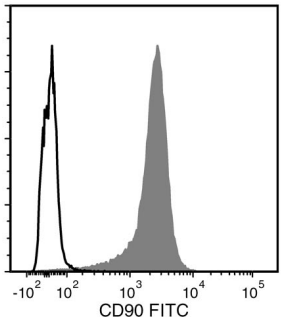
Verified:	FC
Reported:	FC
Special Applications:	This antibody clone has been verified for labeling human mesenchymal cells grown in MesenCult™ Proliferation Kit (Human; Catalog #05411) and MesenCult™-XF Medium (Catalog #05420).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; WB: Western blotting

Properties

Size:	100 tests
Concentration:	20 µL/test
Formulation:	Phosphate-buffered saline containing < 0.1% (w/v) sodium azide and < 0.1% (w/v) bovine serum albumin
Purification:	The antibody was purified by affinity chromatography and conjugated with FITC under optimal conditions.
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 request a lot-specific Certificate of Analysis from techsupport@stemcell.com.
Directions for Use:	For flow cytometry the suggested use of this antibody is 20 µL per 1 x 10e6 cells in 100 µL volume 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 HEL cells labeled with Anti-Human CD90 Antibody, Clone 5E10, FITC (filled histogram) or a mouse IgG1, kappa FITC isotype control antibody (open histogram).

Related Products

PRODUCT NAME	CATALOG #	SIZE
Anti-Human CD90 Antibody, Clone 5E10	60045	100 µg
Anti-Human CD90 Antibody, Clone 5E10, FITC	60045FI	100 tests
Anti-Human CD90 Antibody, Clone 5E10, PE	60045PE	100 tests

References

1. Craig W, et al. Expression of Thy-1 on human hematopoietic progenitor cells. J Exp Med 177(5): 1331-42, 1993 (FC, IP, WB)
2. Holden JT, et al. Characterization of Thy-1 (CDw90) expression in CD34+ acute leukemia. Blood 86(1): 60-65, 1995
3. Mayani H, Lansdorp PM. Thy-1 expression is linked to functional properties of primitive hematopoietic progenitor cells from human umbilical cord blood. Blood 83(9): 2410-07, 1994 (FC)
4. Murray LJ, Tsukamoto A, Hoffman R. CD34+Thy-1+Lin- stem cells from mobilized peripheral blood. Leuk Lymphoma 22(1-2): 37-42, 1996 (FC)
5. Mason D, et al. Eds. Leukocyte Typing VII: White Cell Differentiation Antigens. Oxford University Press, Oxford, UK, p. 836, 2002
6. Hung JT, et al. 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, 2005 (IHC, FC)