

## Anti-Human CD105 (Endoglin) Antibody, Clone SN6h, APC



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## Antibodies

Mouse monoclonal IgG1 antibody  
against human CD105 (endoglin),  
APC-conjugated

Catalog #100-0243

25 Tests

5 µL/test

## Product Description

The SN6h antibody reacts with CD105 (endoglin), an ~180 kDa cell-surface glycoprotein that is a disulfide-bonded homodimer comprising ~90 kDa type I transmembrane subunits. CD105 is a component of the TGF- $\beta$  receptor complex and is expressed by vascular endothelial smooth muscle cells, syncytiotrophoblasts of placenta, and activated macrophages, and at relatively low levels by stromal fibroblasts. Its expression is also observed in some types of tumors, and levels are up-regulated on the endothelium during angiogenesis. In concert with signaling receptors, CD105 binds to TGF- $\beta$ 1 and TGF- $\beta$ 3 with high affinity, but does not bind TGF- $\beta$ 2. Other ligands reportedly include Activin A, BMP-2, BMP-7, and BMP-9. CD105 has important roles in angiogenesis, cardiovascular development, and vascular remodeling, and the protein serves a regulatory role in cytoskeletal reorganization by modulating the sites of focal adhesion and cellular migration. Certain mutations in CD105 result in the autosomal dominant disorder hereditary hemorrhagic telangiectasia (HHT). The epitope of the SN6h antibody is reportedly localized within the Ala119-Gly230 sequence of the N-terminal OR1 (orphan region 1) domain. CD105 is often used in combination with CD73 and CD90 to phenotype mesenchymal stromal cells (MSCs).

Target Antigen Name:	CD105 (Endoglin)
Alternative Names:	Cell surface MJ7/18 antigen, Edg, END, ENG, HHT1, ORW1
Gene ID:	2022
Species Reactivity:	Human
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	SN6h
Isotype:	IgG1, kappa
Immunogen:	CD105 (endoglin) isolated from acute lymphoblastic leukemia cells
Conjugate:	APC (Allophycocyanin)

## Applications

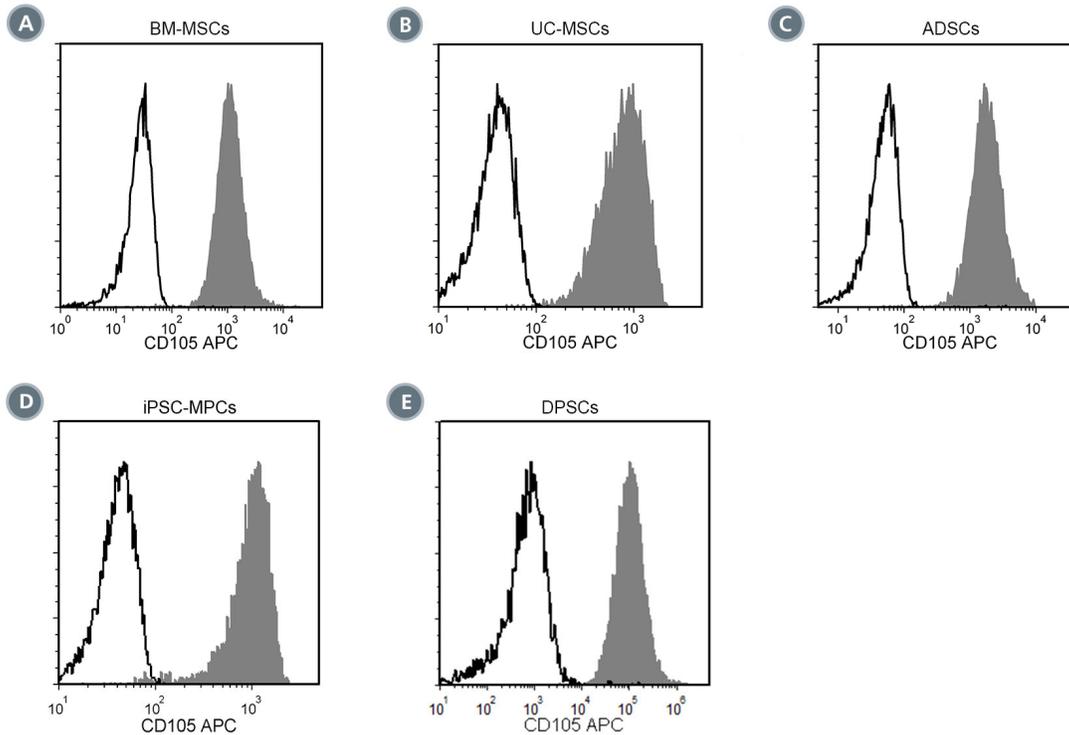
Verified:	FC
Reported:	FC
Special Applications:	This antibody clone has been verified for labeling human MSCs cultured using MesenCult™ Proliferation Kit (Human; Catalog #05411), MesenCult™-ACF Plus Medium (Catalog #05445), and MesenCult™-hPL Medium Kit (Catalog #05439).

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 and unconjugated antibody.
Stability and Storage:	Stable until expiry date (EXP) on label. Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light.
Directions for Use:	For flow cytometry, the suggested use of this antibody is 5 µL per 1 x 10 <sup>6</sup> cells in 100 µL. It is recommended that the antibody be titrated for optimal performance for each application.

## Data



- (A) Flow cytometry analysis of human bone marrow-derived mesenchymal stromal cells (BM-MSCs) cultured in MesenCult™-ACF Plus Medium (Catalog #05445) then labeled with Anti-Human CD105 (Endoglin) Antibody, Clone SN6h, APC (filled histogram) or Mouse IgG1, kappa Isotype Control Antibody, Clone MOPC-21, APC (Catalog #60070AZ; solid line histogram).
- (B) Flow cytometry analysis of human umbilical cord-derived mesenchymal stromal cells (UC-MSCs) cultured in MesenCult™-ACF Plus Medium then labeled with Anti-Human CD105 (Endoglin) Antibody, Clone SN6h, APC (filled histogram) or Mouse IgG1, kappa Isotype Control Antibody, Clone MOPC-21, APC (solid line histogram).
- (C) Flow cytometry analysis of human adipose tissue-derived MSCs (ADSCs) cultured in MesenCult™-ACF Plus Medium then labeled with Anti-Human CD105 (Endoglin) Antibody, Clone SN6h, APC (filled histogram) or Mouse IgG1, kappa Isotype Control Antibody, Clone MOPC-21, APC (solid line histogram).
- (D) Flow cytometry analysis of human induced pluripotent stem cell-derived mesenchymal progenitor cells (iPSC-MPCs) cultured in MesenCult™-ACF Plus Medium then labeled with Anti-Human CD105 (Endoglin) Antibody, Clone SN6h, APC (filled histogram) or Mouse IgG1, kappa Isotype Control Antibody, Clone MOPC-21, APC (solid line histogram).
- (E) Flow cytometry analysis of human dental pulp-derived mesenchymal stromal cells (DPSCs) cultured in MesenCult™-ACF Plus Medium then labeled with Anti-Human CD105 (Endoglin) Antibody, Clone SN6h, APC (filled histogram) or Mouse IgG1, kappa Isotype Control Antibody, Clone MOPC-21, APC (solid line histogram).

## Related Products

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## References

- Hsieh CH et al. (2017) Differential expression of CD44 and CD24 markers discriminates the epithelioid from the fibroblastoid subset in a sarcomatoid renal carcinoma cell line: Evidence suggesting the existence of cancer stem cells in both subsets as studied with sorted cells. *Oncotarget* 8(9): 15593–15609. (FC)
- Matak D et al. (2017) Functional significance of CD105-positive cells in papillary renal cell carcinoma. *BMC Cancer* 17(1): 1–17. (ICC)

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