Antibodies

Anti-Human CD105 Antibody, Clone 43A3

Mouse monoclonal IgG1 antibody against human, mouse CD105 (endoglin), unconjugated

Catalog #60039

100 µg 0.5 mg/mL

STEMCELL™ TECHNOLOGIES
Scientists Helping Scientists™ | WWW.STEMCELL.COM
TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM
FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Product Description

The 43A3 antibody reacts with CD105 (endoglin), an ~180 kDa cell surface glycoprotein which is a disulfide-bonded homodimer of ~90 kDa type I transmembrane subunits. CD105 is a component of the TGF-β 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-β1 and TGF-β3 with high affinity, but does not bind TGF-β2. Other ligands reportedly include Activin A, BMP-2 and BMP-7. 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.

Target Antigen Name:	CD105 (Endoglin)
Alternative Names:	Endoglin
Gene ID:	2022
Species Reactivity:	Human, Mouse
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	43A3
Isotype:	IgG1, kappa
Immunogen:	L-cells transfected with human CD105
Conjugate:	Unconjugated

Applications

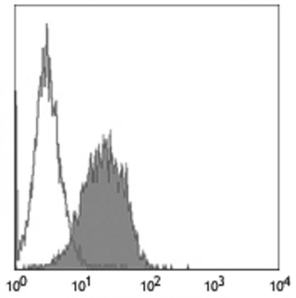
Verified:	FC
Reported:	FC, IHC, IP, WB
Special Applications:	This antibody clone has been verified for labeling human mesenchymal cells grown in MesenCult™ Proliferation Kit (Human; Catalog #05411) and MesenCult™-XF Medium (Catalog #05420).

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

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Purification:	The antibody was purified by affinity chromatography.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. 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 ≤ 2.0 µg per 1 x 10e6 cells in 100 µL volume. It is recommended that the antibody be titrated for optimal performance for each application.

Data



CD105 FITC

Flow cytometry analysis of human THP-1 monocytic cells labeled with Anti-Human CD105 Antibody, Clone 43A3, followed by anti-mouse IgG, FITC (filled histogram) or a mouse IgG1, kappa isotype control antibody followed by anti-mouse IgG, FITC (open histogram).

Related Products

PRODUCT NAME	CATALOG #	SIZE
Anti-Human CD105 Antibody, Clone 43A3	60039	100 µg
Anti-Human CD105 Antibody, Clone 43A3, PE	60039PE	100 tests
Anti-Human CD105 Antibody, Clone 43A3, PE	60039PE.1	25 tests
Anti-Human CD105 Antibody, Clone 43A3, Alexa Fluor® 488	60039AD	100 tests
Anti-Human CD105 Antibody, Clone 43A3, Alexa Fluor® 488	60039AD.1	25 tests

References

1. Bühring HJ, et al. Endoglin is expressed on a subpopulation of immature erythroid cells of normal human bone marrow. Leukemia 5(10): 841-47, 1991
2. Wu X, et al. Cloning and characterization of the murine activin receptor like kinase-1 (ALK-1) homolog. Biochem Biophys Res Commun 216(1): 78-83, 1995
3. Altomonte M, et al. Expression and structural features of Endoglin (CD105), a transforming growth factor β1 and β3 binding protein, in human melanoma. Br J Cancer 74(10): 1586-91, 1996
4. Gallione CJ, et al. Mutation and expression analysis of the Endoglin gene in hereditary hemorrhagic telangiectasia reveals null alleles. Hum Mutat 11(4): 286-94, 1998
5. Azuma, H. Genetic and molecular pathogenesis of hereditary hemorrhagic telangiectasia. J Med Invest 47(3-4): 81-90, 2000
6. Bourdeau, A, et al. Endoglin-deficient mice, a unique model to study hereditary hemorrhagic telangiectasia. Trends Cardiovasc Med 10(7): 279-85, 2000
7. Pierelli L, et al. CD105 (endoglin) expression on hematopoietic stem/progenitor cells. Leuk Lymphoma 42(6): 1195-206, 2001
8. Mason D, et al. Eds. Leucocyte Typing VII. Oxford University Press. New York, 2002 (FC)
9. Vogel W, et al. Heterogeneity among human bone marrow-derived mesenchymal stem cells and neural progenitor cells. Haematologica 88(2): 126-33, 2002 (FC, ICC)
10. HonMou O, et al. Intravenous administration of auto serum-expanded autologous mesenchymal stem cells in stroke. Brain 134(6): 1790-807, 2011
11. Osaka M, et al. Intravenous administration of mesenchymal stem cells derived from bone marrow after contusive spinal cord injury improves functional outcome. Brain Res. 1343: 226-35, 2010
12. Akiyama K, et al. Characterization of bone marrow derived mesenchymal stem cells in suspension. Stem Cell Res Ther 3: 40, 2012 (WB)
13. Marolt D, et al. Engineering bone tissue from human embryonic stem cells. Proc Natl Acad Sci USA 109(22): 8705-09, 2012 (IHC)