

Endoglin (MJ7/18): sc-18893

BACKGROUND

Hereditary hemorrhagic telangiectasia (HHT) is an autosomal dominant disorder characterized by vascular abnormalities such as dilated vessels, hemorrhages, liver and lung congestion, and brain or heart ischemia. Mutations in two genes, Endoglin (also designated CD105) and ALK-1 (Activin receptor-like kinase 1, also designated TGF β superfamily RI), are responsible for HHT. Endoglin is mutated in HHT1, and ALK-1 is mutated in HHT2, both of which are thought to be caused by haploinsufficiency. Endoglin and ALK-1 are type III and type I members of the TGF β receptor superfamily, respectively, that are expressed on vascular endothelial cells. Endoglin can only bind ligands of the TGF β superfamily via association with the respective ligand binding receptors for TGF β 1, TGF β 3, Activin-A, BMP-2 and BMP-7. The human ALK-1 gene encodes two protein species which exist as a result of either glycosylation or alternative splicing events. ALK-1 preferentially binds TGF β 1 and is expressed in bone marrow stromal cells, lung, brain, kidney and spleen.

CHROMOSOMAL LOCATION

Genetic locus: ENG (human) mapping to 9q34.11; Eng (mouse) mapping to 2 B.

SOURCE

Endoglin (MJ7/18) is a rat monoclonal antibody raised against inflamed skin tissue of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Endoglin (MJ7/18) is available conjugated to either phycoerythrin (sc-18893 PE) or fluorescein (sc-18893 FITC), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

Endoglin (MJ7/18) is recommended for detection of Endoglin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for Endoglin siRNA (h): sc-35302, Endoglin siRNA (m): sc-35303, Endoglin shRNA Plasmid (h): sc-35302-SH, Endoglin shRNA Plasmid (m): sc-35303-SH, Endoglin shRNA (h) Lentiviral Particles: sc-35302-V and Endoglin shRNA (m) Lentiviral Particles: sc-35303-V.

Molecular Weight of reduced Endoglin: 84 kDa.

Molecular Weight of non reduced Endoglin: 130 kDa.

Positive Controls: Endoglin (m): 293T Lysate: sc-126793 or mouse embryo extract: sc-364239.

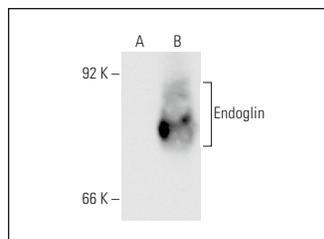
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

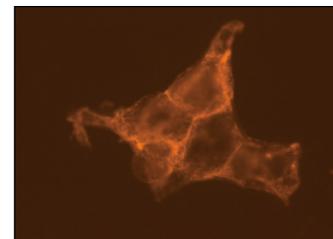
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



Endoglin (MJ7/18): sc-18893. Western blot analysis of Endoglin expression in non-transfected: sc-117752 (A) and mouse Endoglin transfected: sc-126793 (B) 293T whole cell lysates.



Endoglin (MJ7/18): sc-18893. Immunofluorescence staining of methanol-fixed JAR cells showing membrane localization.

SELECT PRODUCT CITATIONS

- Lebrin, F., et al. 2004. Endoglin promotes endothelial cell proliferation and TGF β /ALK-1 signal transduction. *EMBO J.* 23: 4018-4028.
- Hou, L., et al. 2009. Fumagillin inhibits colorectal cancer growth and metastasis in mice: *in vivo* and *in vitro* study of anti-angiogenesis. *Pathol. Int.* 59: 448-461.
- Gonzalez, C.R., et al. 2010. Expression of the TGF- β 1 system in human testicular pathologies. *Reprod. Biol. Endocrinol.* 8: 148.
- Freitag, N., et al. 2013. Interfering with Gal-1-mediated angiogenesis contributes to the pathogenesis of preeclampsia. *Proc. Natl. Acad. Sci. USA* 110: 11451-11456.
- Shah, N.V., et al. 2014. Intravitreal and subconjunctival melphalan for retinoblastoma in transgenic mice. *J. Ophthalmol.* 2014: 829879.
- Kittaka, M., et al. 2015. Clumps of a mesenchymal stromal cell/extracellular matrix complex can be a novel tissue engineering therapy for bone regeneration. *Cytotherapy* 17: 860-873.
- Ayaz-Guner, S., et al. 2020. A comparative study on normal and obese mice indicates that the secretome of mesenchymal stromal cells is influenced by tissue environment and physiopathological conditions. *Cell Commun. Signal.* 18: 118.
- Park, J.H., et al. 2022. Organ-specific differentiation of human adipose-derived stem cells in various organs of xenotransplanted rats: a pilot study. *Life* 12: 1116.
- Xie, T., et al. 2023. Myricetin alleviates H₂O₂-induced senescence and apoptosis in rat nucleus pulposus-derived mesenchymal stem cells. *Folia Histochem. Cytobiol.* 61: 98-108.



See **Endoglin (P3D1): sc-18838** for Endoglin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.