

# Endoglin (2Q1707): sc-71042

## 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 $\beta$  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 $\beta$  receptor superfamily, respectively, that are expressed on vascular endothelial cells. Endoglin can only bind ligands of the TGF $\beta$  superfamily via association with the respective ligand binding receptors for TGF $\beta$ 1, TGF $\beta$ 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 $\beta$ 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 (2Q1707) is a rat monoclonal antibody raised against inflamed skin tissue of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Endoglin (2Q1707) 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> 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.

## RESEARCH USE

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

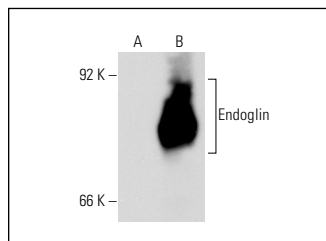
## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## STORAGE

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

## DATA



Endoglin (2Q1707): sc-71042. Western blot analysis of Endoglin expression in non-transfected: sc-117752 (A) and mouse Endoglin transfected: sc-126793 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Schenke-Layland, K., et al. 2009. Adipose tissue-derived cells improve cardiac function following myocardial infarction. *J. Surg. Res.* 153: 217-223.
- Shyu, K.G., et al. 2013. Mechanical stretch via transforming growth factor- $\beta$ 1 activates microRNA208a to regulate endoglin expression in cultured rat cardiac myoblasts. *Eur. J. Heart Fail.* 15: 36-45.
- Favaron, P.O., et al. 2014. Yolk sac mesenchymal progenitor cells from new world mice (*Necomys lasiurus*) with multipotent differential potential. *PLoS ONE* 9: e95575.
- Mançanares, C.A., et al. 2015. Isolation and characterization of mesenchymal stem cells from the yolk sacs of bovine embryos. *Theriogenology* 84: 887-898.
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- Landa-Solís, C., et al. 2018. Behavior of multipotent stem cells isolated in mobilized peripheral blood from sheep after culture with human chondrogenic medium. *Tissue Cell* 52: 116-123.
- Radhakrishnan, S., et al. 2019. Effect of passaging on the stemness of infrapatellar fat pad-derived stem cells and potential role of nucleostemin as a prognostic marker of impaired stemness. *Mol. Med. Rep.* 20: 813-829.
- Venugopal, B., et al. 2020. Bioengineered corneal epithelial cell sheet from mesenchymal stem cells-A functional alternative to limbal stem cells for ocular surface reconstruction. *J. Biomed. Mater. Res. B, Appl. Biomater.* 108: 1033-1045.



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