SANTA CRUZ BIOTECHNOLOGY, INC.

Endoglin (H-300): sc-20632

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 TGFβ 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 TGFβ receptor superfamily, respectively, that are expressed on vascular endothelial cells. Endoglin can only bind ligands of the TGFβ superfamily via association with the respective ligand binding receptors for TGFβ1, TGFβ3, 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 prefer-entially binds TGFβ1 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 (H-300) is a rabbit polyclonal antibody raised against amino acids 27-326 of Endoglin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Endoglin (H-300) is recommended for detection of Endoglin of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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: HEL 92.1.7 cell lysate: sc-2270, Endoglin (m): 293T Lysate: sc-126793 or HL-60 whole cell lysate: sc-2209.

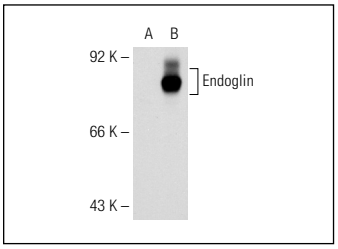
STORAGE

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

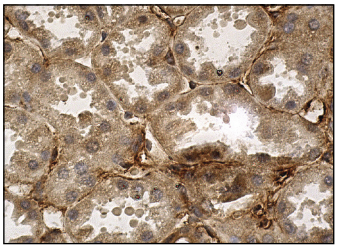
RESEARCH USE

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

DATA



Endoglin (H-300): sc-20632. Western blot analysis of Endoglin expression in non-transfected: sc-117752 (**A**) and mouse Endoglin transfected: sc-126793 (**B**) 293T whole cell lysates.



Endoglin (H-300): sc-20632. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing basement membrane and cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Saad, R.S., et al. 2003. Endoglin (CD105) expression in endometrial carcinoma. Int. J. Gynecol. Pathol. 22: 248-253.
2. Yinon, Y., et al. 2008. Severe intrauterine growth restriction pregnancies have increased placental Endoglin levels: hypoxic regulation via transforming growth factor-β 3. Am. J. Pathol. 172: 77-85.
3. Ma, Y.H., et al. 2008. Expression of stem cell markers in human astrocytomas of different WHO grades. J. Neurooncol. 86: 31-45.
4. Oxmann, D., et al. 2008. Endoglin expression in metastatic breast cancer cells enhances their invasive phenotype. Oncogene 27: 3567-3575.
5. Jeyabalan, A., et al. 2008. Circulating and placental endoglin concentrations in pregnancies complicated by intrauterine growth restriction and preeclampsia. Placenta 29: 555-563.
6. Ozbey, O., et al. 2009. The effect of systemic corticosteroid treatment on the expression of Notch 1, δ, CD-105 and CD-166 in rat articular cartilage. Acta Histochem. 112: 424-431.
7. Wang, S., et al. 2009. Diabetes-relevant regulation of cultured blood outgrowth endothelial cells. Microvasc. Res. 78: 174-179.
8. Haze, A., et al. 2009. Regeneration of bone and periodontal ligament induced by recombinant amelogenin after periodontitis. J. Cell. Mol. Med. 13: 1110-1124.
9. Gromova, P., et al. 2012. ENDOGLIN/CD105 is expressed in KIT positive cells in the gut and in gastrointestinal stromal tumours. J. Cell. Mol. Med. 16: 306-317.