SANTA CRUZ BIOTECHNOLOGY, INC.

Endoglin (SN6): sc-57099

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 preferentially 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.

SOURCE

Endoglin (SN6) is a mouse monoclonal antibody raised against partially purified cell membrane antigens of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Endoglin (SN6) is available conjugated to either phycoerythrin (sc-57099 PE) or fluorescein (sc-57099 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

Endoglin (SN6) is recommended for detection of Endoglin cell surface antigen of human 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 flow cytometry (1 µg per 1 x 10^6 cells).

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

Molecular Weight of reduced Endoglin: 84 kDa.

Molecular Weight of non reduced Endoglin: 130 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, HEL 92.1.7 cell lysate: sc-2270 or AML-193 whole cell lysate: sc-364182.

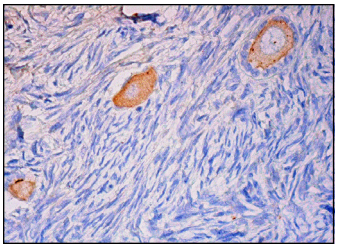
STORAGE

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

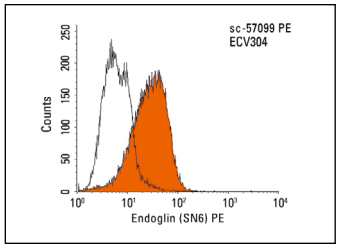
RESEARCH USE

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

DATA



Endoglin (SN6): sc-57099. Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing cytoplasmic staining of follicle cells.



Endoglin (SN6) PE: sc-57099 PE. Indirect FCM analysis of ECV304 cells stained with Endoglin (SN6), followed by PE-conjugated goat anti-mouse IgG: sc-3738. Black line histogram represents the isotype control, normal mouse IgG_1: sc-3877.

SELECT PRODUCT CITATIONS

1. Somal, A., et al. 2016. A comparative study of growth kinetics, *in vitro* differentiation potential and molecular characterization of fetal adnexa derived caprine mesenchymal stem cells. PLoS ONE 11: e0156821.
2. Somal, A., et al. 2017. Impact of cryopreservation on caprine fetal adnexa derived stem cells and its evaluation for growth kinetics, phenotypic characterization, and wound healing potential in xenogenic rat model. J. Cell. Physiol. 232: 2186-2200.
3. Bhat, I.A., et al. 2019. An allogenic therapeutic strategy for canine spinal cord injury using mesenchymal stem cells. J. Cell. Physiol. 234: 2705-2718.
4. Joseph, A., et al. 2020. Mesenchymal stem cell-conditioned media: a novel alternative of stem cell therapy for quality wound healing. J. Cell. Physiol. 235: 5555-5569.
5. Marioni, G., et al. 2020. Prognostic significance of CD105- and CD31-assessed microvessel density in paired biopsies and surgical samples of laryngeal carcinoma. Cancers 12: 2059.
6. Tomar, N.R., et al. 2022. Isolation and propagation of classical swine fever virus in porcine Wharton's Jelly mesenchymal stem cells. Anim. Biotechnol. 33: 629-637.
7. Shabir, U., et al. 2022. Smad4 and γ-secretase knock-down effect on osteogenic differentiation mediated via Runx2 in canine mesenchymal stem cells. Res. Vet. Sci. 145: 116-124.
8. Alessandrini, L., et al. 2022. Tumor-stroma ratio, neoangiogenesis and prognosis in laryngeal carcinoma. A pilot study on preoperative biopsies and matched surgical specimens. Oral Oncol. 132: 105982.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.