SANTA CRUZ BIOTECHNOLOGY, INC.

Lefty-A (h): 293T Lysate: sc-115341

BACKGROUND

The TGFβ superfamily is composed of numerous growth and differentiation factors, including transforming growth factor (TGF) 1, 2 and 3; growth/differentiation factor (GDF) 1-9; Mullerian inhibiting substance (MIS); bone morphogenic protein (BMP) 2-8; glial cell line-derived neurotrophic factor (GDNF); inhibins α, β-A, β-B and β-C; Lefty and Nodal. Members of the TGF superfamily are involved in embryonic development and adult tissue homeostasis. Lefty-A and Lefty-B are homologues of murine Lefty-1 and Lefty-2. Lefty-1 is required for left-right axis determination as a regulator of Lefty-2 and Nodal. It is a secreted protein expressed on the left side of developing embryos. The expression of Lefty-1 is mostly in the prospective floor plate (PFP), although weak expression can be seen in the lateral-plate mesoderm (LPM). It is involved in establishing left-right asymmetry of the organ systems of mammals. Lefty-A plays a role in endometrial bleeding. Mutations in this gene have been associated with left-right axis malformations, particularly in the heart and lungs. Some types of infertility have been associated with dysregulated expression of this gene in the endometrium.

REFERENCES

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2. Massagué, J. 1990. The transforming growth factor-β family. Annu. Rev. Cell Biol. 6: 597-641.
3. Meno, C., Saijoh, Y., Fujii, H., Ikeda, M., Yokoyama, T., Yokoyama, M., Toyoda, Y. and Hamada, H. 1996. Left-right asymmetric expression of the TGFβ-family member Lefty in mouse embryos. Nature 381: 151-155.
4. Kothapalli, R., Buyuksal, I., Wu, S.Q., Chegini, N. and Tabibzadeh, S. 1997. Detection of EBAF, a novel human gene of the transforming growth factor β superfamily association of gene expression with endometrial bleeding. J. Clin. Invest. 99: 2342-2350
5. McPherron, A.C., Lawler, A.M. and Lee, S.J. 1997. Regulation of skeletal muscle mass in mice by a new TGFβ superfamily member. Nature 387: 83-90.
6. Meno, C., Shimono, A., Saijoh, Y., Yashiro, K., Mochida, K., Ohishi, S., Noji, S., Kondoh, H. and Hamada, H. 1998. Lefty-1 is required for left-right determination as a regulator of Lefty-2 and Nodal. Cell 94: 287-297.

CHROMOSOMAL LOCATION

Genetic locus: LEFTY2 (human) mapping to 1q42.12.

PRODUCT

Lefty-A (h): 293T Lysate represents a lysate of human Lefty-A transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Lefty-A (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Lefty-A antibodies. Recommended use: 10-20 µl per lane.

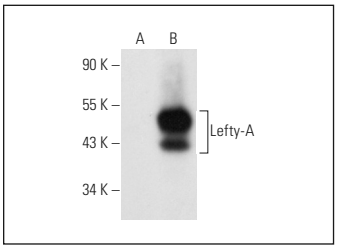
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Lefty (F-11): sc-166708 is recommended as a positive control antibody for Western Blot analysis of enhanced human Lefty-A expression in Lefty-A transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Lefty (F-11): sc-166708. Western blot analysis of Lefty-A expression in non-transfected: sc-117752 (**A**) and human Lefty-A transfected: sc-115341 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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