SANTA CRUZ BIOTECHNOLOGY, INC.

LEF-1 (C-19): sc-8592

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The TCF (T cell factor) family of transcription factors are activated by the Wnt-1 and Wingless pathways and are characterized by the presence of a conserved protein motif, the high mobility group (HMG) 1 box, which mediates DNA binding. The TCF (T cell factor) proteins are required during development and they include TCF-1, which is essential for lymphoid cell development, TCF-3 and TCF-4, which are implicated in neuronal development and LEF (leukemia enhancer factor). The Wnt mediated signaling pathway induces cytosolic β-catenin binding to TCF proteins within the nucleus, leading to the enhanced expression of the Wnt target genes. The β-catenin-TCF complexes are negatively regulated by the adenomatous polyposis coli (APC) tumor suppressor protein, which phosphorylates β-catenin and, in turn, increases the degradation of cytosolic β-catenin to, thereby, inhibit the transcriptional activity of the TCF proteins. Mutations in the APC gene, which are commonly observed in colorectal carcinomas, disrupt this regulatory pathway and correlate to an accumulation of β-catenin and the increased activation of the TCF target genes.

CHROMOSOMAL LOCATION

Genetic locus: LEF1 (human) mapping to 4q25; Lef1 (mouse) mapping to 3 G3.

SOURCE

LEF-1 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of LEF-1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8592 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-8592 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LEF-1 (C-19) is recommended for detection of LEF-1 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LEF-1 (C-19) is also recommended for detection of LEF-1 in additional species, including avian.

Suitable for use as control antibody for LEF-1 siRNA (h): sc-35804, LEF-1 siRNA (m): sc-35805, LEF-1 shRNA Plasmid (h): sc-35804-SH, LEF-1 shRNA Plasmid (m): sc-35805-SH, LEF-1 shRNA (h) Lentiviral Particles: sc-35804-V and LEF-1 shRNA (m) Lentiviral Particles: sc-35805-V.

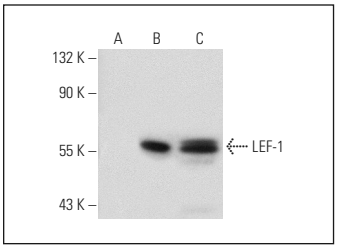
LEF-1 (C-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Positive Controls: Jurkat whole cell lysate: sc-2204, HuT 78 whole cell lysate: sc-2208 or LEF-1 (h): 293T Lysate: sc-116288.

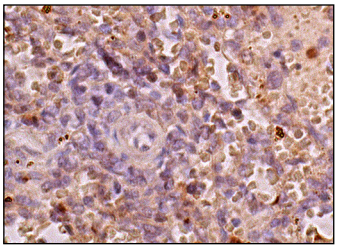
STORAGE

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

DATA



LEF-1 (C-19): sc-8592. Western blot analysis of LEF-1 expression in non-transfected 293T: sc-117752 (**A**), human LEF-1 transfected 293T: sc-116288 (**B**) and Jurkat (**C**) whole cell lysates.



LEF-1 (C-19): sc-8592. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing nuclear and cytoplasmic staining of cells in red pulp.

SELECT PRODUCT CITATIONS

1. Niemann, C., et al. 2002. Expression of δNLef1 in mouse epidermis results in differentiation of hair follicles into squamous epidermal cysts and formation of skin tumours. Development 129: 95-109.
2. Balmelle, N., et al. 2004. Developmental activation of the TCR α enhancer requires functional collaboration among proteins bound inside and outside the core enhancer. J. Immunol. 173: 5054-5063.
3. Del Valle, L., et al. 2005. Detection of JC virus DNA sequences and expression of viral T antigen and agnoprotein in esophageal carcinoma. Cancer 103: 516-527.
4. Carabana, J., et al. 2005. Regulation of the murine Dd2 promoter by upstream stimulatory factor 1, RUNX1 and c-Myb. J. Immunol. 174: 4144-4152.
5. Yang, C.K., et al. 2006. Differential use of functional domains by coiled-coil coactivator in its synergistic coactivator function with β-catenin or GRIP1. J. Biol. Chem. 281: 3389-3397.
6. Takemoto, T., et al. 2006. Convergence of Wnt and FGF signals in the genesis of posterior neural plate through activation of the Sox-2 enhancer N-1. Development 133: 297-306.
7. Spater, D., et al. 2006. Wnt9a signaling is required for joint integrity and regulation of Ihh during chondrogenesis. Development 133: 3039-3049.

RESEARCH USE

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