

TLE1 (N-18): sc-13368

BACKGROUND

The Notch signaling pathway controls cellular interactions important for the specification of a variety of fates in both invertebrates and vertebrates. Key players in the Notch pathway are the TLE genes (for transducin-like enhancer of split, also designated ESG for enhancer of split groucho), which are human homologs of the *Drosophila* groucho gene. Groucho is a transcriptional repressor that plays a key role in neurogenesis, segmentation and sex determination. TLEs associate with chromatin in live cells and specifically with Histone H3, but not with other core histones. Expression of the TLE genes, TLE1, TLE2, TLE3 and TLE4, correlate with immature epithelial cells that are progressing toward a terminally differentiated state, suggesting a role during epithelial differentiation. TLE1, TLE2 and TLE3 have elevated expression in cervical squamous metaplasias and carcinomas, while TLE4 is most highly expressed in the brain, particularly in the caudate nucleus. TLE1 and TLE4 contain SP and WD40 domains, through which TLE1 binds AML1 to inhibit AML1-induced transactivation of the CSF1 receptor. In early stages of cell differentiation, TLE1 is upregulated, and TLE2 and TLE4 are downregulated. In later stages, TLE2 and TLE4 are upregulated, and expression of TLE1 decreases. The genetic loci for TLE3 and TLE4 are chromosomes 15q23 and 9, respectively.

REFERENCES

1. Stifani, S., et al. 1992. Human homologs of a *Drosophila* enhancer of split gene product define a novel family of nuclear proteins. *Nat. Genet.* 2: 119-127.
2. Paroush, Z., et al. 1994. Groucho is required for *Drosophila* neurogenesis, segmentation, and sex determination and interacts directly with hairy-related bHLH proteins. *Cell* 79: 805-815.

CHROMOSOMAL LOCATION

Genetic locus: TLE1 (human) mapping to 9q21.32; Tle1 (mouse) mapping to 4 C3.

SOURCE

TLE1 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TLE1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13368 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-13368 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

TLE1 (N-18) is recommended for detection of TLE1 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).

TLE1 (N-18) is also recommended for detection of TLE1 in additional species, including equine and canine.

Suitable for use as control antibody for TLE1 siRNA (h): sc-38558, TLE1 siRNA (m): sc-38559, TLE1 shRNA Plasmid (h): sc-38558-SH, TLE1 shRNA Plasmid (m): sc-38559-SH, TLE1 shRNA (h) Lentiviral Particles: sc-38558-V and TLE1 shRNA (m) Lentiviral Particles: sc-38559-V.

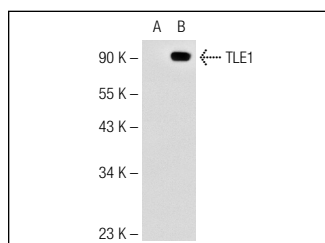
TLE1 (N-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of nuclear TLE1 form: 118 kDa.

Molecular Weight of migrating TLE1 forms: 90-93 kDa.

Positive Controls: TLE1 (h): 293T Lysate: sc-171466 or P19 cell lysate: sc-24760.

DATA



TLE1 (N-18): sc-13368. Western blot analysis of TLE1 expression in non-transfected: sc-117752 (A) and human TLE1 transfected: sc-171466 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Sharma, M., et al. 2004. Coexpression of Cux-1 and Notch signaling pathway components during kidney development. *Dev. Dyn.* 231: 828-838.
2. Riz, I., et al. 2009. Transcriptional activation by TLX1/Hox11 involves GRO/TLE corepressors. *Biochem. Biophys. Res. Commun.* 380: 361-365.
3. Chiaro, C., et al. 2012. Tcf3 and cell cycle factors contribute to butyrate resistance in colorectal cancer cells. *Biochem. Biophys. Res. Commun.* 428: 121-126.



Try **TLE1 (F-4): sc-137098** or **TLE1 (C-7): sc-137097**, our highly recommended monoclonal alternatives to TLE1 (N-18). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **TLE1 (F-4): sc-137098**.