SANTA CRUZ BIOTECHNOLOGY, INC.

TLE3 (N-20): sc-13374

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

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. Miyasaka, H., et al. 1993. Molecular cloning and expression of mouse and human cDNA encoding AES and ESG proteins with strong similarity to *Drosophila* enhancer of split groucho protein. Europ. J. Biochem. 216: 343-352.
3. Artavanis-Tsakonas, S., et al. 1995. Notch signaling. Science 268: 225-232.
4. Liu, Y., et al. 1996. Epithelial expression and chromosomal location of human TLE genes: implications for notch signaling and neoplasia. Genomics 31: 58-64.
5. Imai, Y., et al. 1998. TLE, the human homolog of groucho, interacts with AML1 and acts as a repressor of AML1-induced transactivation. Biochem. Biophys. Res. Commun. 252: 582-589.

CHROMOSOMAL LOCATION

Genetic locus: TLE3 (human) mapping to 15q23; Tle3 (mouse) mapping to 9 B.

SOURCE

TLE3 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TLE3 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-13374 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-13374 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TLE3 (N-20) is recommended for detection of TLE3 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).

TLE3 (N-20) is also recommended for detection of TLE3 in additional species, including canine, bovine and porcine.

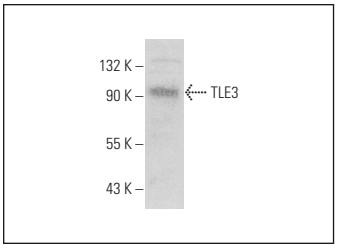
Suitable for use as control antibody for TLE3 siRNA (h): sc-36683, TLE3 siRNA (m): sc-36684, TLE3 shRNA Plasmid (h): sc-36683-SH, TLE3 shRNA Plasmid (m): sc-36684-SH, TLE3 shRNA (h) Lentiviral Particles: sc-36683-V and TLE3 shRNA (m) Lentiviral Particles: sc-36684-V.

TLE3 (N-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TLE3: 83 kDa.

Positive Controls: A-431 nuclear extract: sc-2122, HeLa nuclear extract: sc-2120 or HEK293 whole cell lysate: sc-45136.

DATA



TLE3 (N-20): sc-13374. Western blot analysis of TLE3 expression in HEK293 whole cell lysate.

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.

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.