

# TLE2 (H-191): sc-9122

## 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. 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.
3. Liu, Y., et al. 1996. Epithelial expression and chromosomal location of human TLE genes: implications for notch signaling and neoplasia. *Genomics* 31: 58-64.
4. Palaparti, A., et al. 1997. The Groucho/transducin-like enhancer of split transcriptional repressors interact with the genetically defined amino-terminal silencing domain of histone H3. *J. Biol. Chem.* 272: 26604-26610.
5. Levanon, D., et al. 1998. Transcriptional repression by AML1 and LEF-1 is mediated by the TLE/Groucho corepressors. *Proc. Natl. Acad. Sci. USA* 95: 11590-11595.
6. Yao, J., et al. 1998. Combinatorial expression patterns of individual TLE proteins during cell determination and differentiation suggest non-redundant functions for mammalian homologs of *Drosophila* Groucho. *Dev. Growth. Differ.* 40: 133-146.

## CHROMOSOMAL LOCATION

Genetic locus: TLE2 (human) mapping to 19p13.3; Tle2 (mouse) mapping to 10 C1.

## SOURCE

TLE2 (H-191) is a rabbit polyclonal antibody raised against amino acids 230-420 mapping within an internal region of TLE2 of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9122 X, 200 µg/0.1 ml.

## APPLICATIONS

TLE2 (H-191) is recommended for detection of TLE2 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).

TLE2 (H-191) is also recommended for detection of TLE2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TLE2 siRNA (h): sc-38560, TLE2 siRNA (m): sc-38561, TLE2 shRNA Plasmid (h): sc-38560-SH, TLE2 shRNA Plasmid (m): sc-38561-SH, TLE2 shRNA (h) Lentiviral Particles: sc-38560-V and TLE2 shRNA (m) Lentiviral Particles: sc-38561-V.

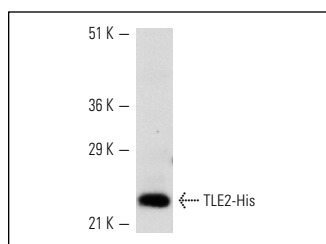
TLE2 (H-191) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of TLE2: 80 kDa.

Molecular Weight (observed) of TLE2: 92 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132 or Jurkat whole cell lysate: sc-2204.

## DATA



TLE2 (H-191): sc-9122. Western blot analysis of polyhistidine-tagged human recombinant TLE2.

## STORAGE

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

**MONOS**  
Satisfaction  
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Try **TLE2 (D-10): sc-374226**, our highly recommended monoclonal alternative to TLE2 (H-191).