

TLE2 (H-321): sc-9123

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.

SOURCE

TLE2 (H-321) is a rabbit polyclonal antibody raised against amino acids 424-744 mapping at the C-terminus of TLE2 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9123 X, 200 µg/0.1 ml.

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

TLE2 (H-321) is recommended for detection of a broad range of TLE proteins 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-321) is also recommended for detection of a broad range of TLE proteins in additional species, including equine, canine, bovine, porcine and avian.

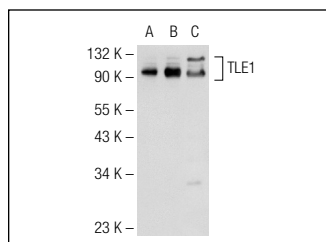
TLE2 (H-321) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of TLE2: 80 kDa.

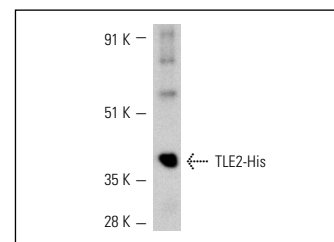
Molecular Weight (observed) of TLE2: 92 kDa.

Positive Controls: TLE1 (h): 293T Lysate: sc-171466, Jurkat nuclear extract: sc-2132 or Jurkat whole cell lysate: sc-2204.

DATA



TLE2 (H-321): sc-9123. Western blot analysis of TLE1 expression in non-transfected 293T: sc-117752 (A), human TLE1 transfected 293T: sc-171466 (B) and Jurkat (C) whole cell lysates.



TLE2 (H-321): sc-9123. Western blot analysis of His-tagged human recombinant TLE2.

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. Olson, L.E., et al. 2005. Barx2 functions through distinct corepressor classes to regulate hair follicle remodeling. *Proc. Natl. Acad. Sci. USA* 102: 3708-3713.
3. Riz, I., et al. 2009. Transcriptional activation by TLX1/Hox11 involves GRO/TLE corepressors. *Biochem. Biophys. Res. Commun.* 380: 361-365.

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Try **TLE2 (D-10): sc-374226**, our highly recommended monoclonal alternative to TLE2 (H-321).