

# TLE1 (M-101): sc-9121

## 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.

## SOURCE

TLE1 (M-101) is a rabbit polyclonal antibody raised against amino acids 200-350 of TLE1 of mouse 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-9121 X, 200 µg/0.1 ml.

## APPLICATIONS

TLE1 (M-101) is recommended for detection of TLE1 and, to a lesser extent, TLE2, TLE3 and TLE4 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 (M-101) is also recommended for detection of TLE1 and, to a lesser extent, TLE2, TLE3 and TLE4 in additional species, including equine, canine and porcine.

TLE1 (M-101) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TLE1 nuclear form: 118 kDa.

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

Positive Controls: P19 cell lysate: sc-24760.

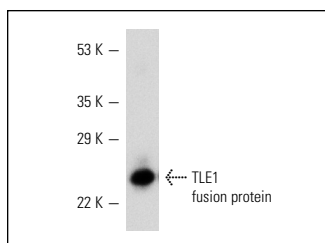
## STORAGE

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

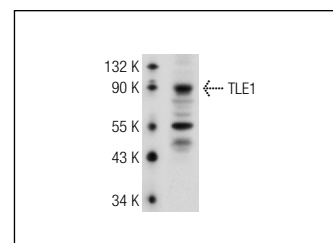
## RESEARCH USE

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

## DATA



TLE1 (M-101): sc-9121. Western blot analysis of His-tagged mouse recombinant TLE1 fusion protein.



TLE1 (M-101): sc-9121. Western blot analysis of TLE1 expression in 293T whole cell lysate.

## SELECT PRODUCT CITATIONS

- Sharma, M., et al. 2004. Coexpression of Cux-1 and Notch signaling pathway components during kidney development. *Dev. Dyn.* 231: 828-838.
- 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.
- Allen, T., et al. 2006. Grg1 acts as a lung-specific oncogene in a transgenic mouse model. *Cancer Res.* 66: 1294-1301.
- Rautajoki, K.J., et al. 2007. Interleukin-4 inhibits caspase-3 by regulating several proteins in the Fas pathway during initial stages of human T helper 2 cell differentiation. *Mol. Cell. Proteomics* 6: 238-251.
- Terry, J., et al. 2007. TLE1 as a diagnostic immunohistochemical marker for synovial sarcoma emerging from gene expression profiling studies. *Am. J. Surg. Pathol.* 31: 240-246.
- Shi, L., et al. 2008. Loss of androgen receptor in aging and oxidative stress through Myb protooncoprotein-regulated reciprocal chromatin dynamics of p53 and poly(ADP-ribose) polymerase PARP-1. *J. Biol. Chem.* 283: 36474-36485.
- Riz, I., et al. 2009. Transcriptional activation by TLX1/HOX11 involves Gro/TLE corepressors. *Biochem. Biophys. Res. Commun.* 380: 361-365.
- Sharma, M., et al. 2009. The homeodomain protein Cux1 interacts with Grg4 to repress p27<sup>kip1</sup> expression during kidney development. *Gene* 439: 87-94.
- Riz, I., et al. 2011. Lentiviral fluorescent protein expression vectors for biotinylation proteomics. *Methods Mol. Biol.* 699: 431-447.
- Dastidar, S.G., et al. 2012. Transducin-like enhancer of Split-1 (TLE1) combines with forkhead box protein G<sub>1</sub> (FoxG1) to promote neuronal survival. *J. Biol. Chem.* 287: 14749-14759.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.