

# TLE3 (M-201): sc-9124

## BACKGROUND

The Notch signaling pathway controls cellular interactions important for the specification of a variety of fates in both invertebrates and vertebrates. TLE (transducin-like enhancer of split) genes (also designated ESG for enhancer of split groucho), which are human homologs of the *Drosophila* groucho gene, play important roles in the Notch pathway. 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 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. *Eur. 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.

## SOURCE

TLE3 (M-201) is a rabbit polyclonal antibody raised against amino acids 200-400 of TLE3 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9124 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.

## PROTOCOLS

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

## APPLICATIONS

TLE3 (M-201) is recommended for detection of TLE3 and, to a lesser extent, TLE1 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).

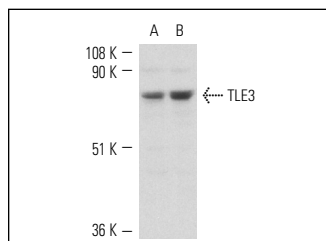
TLE3 (M-201) is also recommended for detection of TLE3 and, to a lesser extent, TLE1 and TLE4 in additional species, including canine, bovine and porcine.

TLE3 (M-201) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

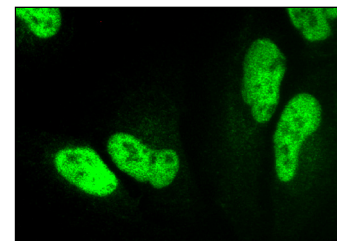
Molecular Weight of TLE3: 83 kDa.

Positive Controls: A-431 nuclear extract: sc-2122, HeLa nuclear extract: sc-2120 or NIH/3T3 whole cell lysate: sc-2210.

## DATA



TLE3 (M-201): sc-9124. Western blot analysis of TLE3 expression in A-431 (A) and HeLa (B) nuclear extracts.



TLE3 (M-201): sc-9124. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear localization.

## SELECT PRODUCT CITATIONS

1. 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.
2. Cuevas, I.C., et al. 2005. Meningioma transcript profiles reveal deregulated Notch signaling pathway. *Cancer Res.* 65: 5070-5075.
3. Brady, G., et al. 2009. Downregulation of RUNX1 by RUNX3 requires the RUNX3 VWRPY sequence and is essential for Epstein-Barr virus-driven B-cell proliferation. *J. Virol.* 83: 6909-6916.
4. Meinhardt, G., et al. 2014. Wnt-dependent T-cell factor-4 controls human extravillous trophoblast motility. *Endocrinology* 155: 1908-1920.



Try **TLE3 (D-10): sc-514798**, our highly recommended monoclonal alternative to TLE3 (M-201). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **TLE3 (D-10): sc-514798**.