

TLE1 (F-4): sc-137098

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.

CHROMOSOMAL LOCATION

Genetic locus: TLE1 (human) mapping to 9q21.32; Tle1 (mouse) mapping to 4 C3.

SOURCE

TLE1 (F-4) is a mouse monoclonal antibody raised against amino acids 200-350 of TLE1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain 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-137098 X, 200 µg/0.1 ml.

TLE1 (F-4) is available conjugated to agarose (sc-137098 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137098 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137098 PE), fluorescein (sc-137098 FITC), Alexa Fluor[®] 488 (sc-137098 AF488), Alexa Fluor[®] 546 (sc-137098 AF546), Alexa Fluor[®] 594 (sc-137098 AF594) or Alexa Fluor[®] 647 (sc-137098 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-137098 AF680) or Alexa Fluor[®] 790 (sc-137098 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

TLE1 (F-4) is recommended for detection of TLE1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for TLE1 siRNA (h): sc-38558, TLE1 siRNA (m): sc-38559, TLE1 shRNA Plasmid (h): sc-38558-SH, TLE1 shRNA Plasmid (m): sc-38559-SH, TLE1 shRNA (h) Lentiviral Particles: sc-38558-V and TLE1 shRNA (m) Lentiviral Particles: sc-38559-V.

TLE1 (F-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TLE1 nuclear form: 118 kDa.

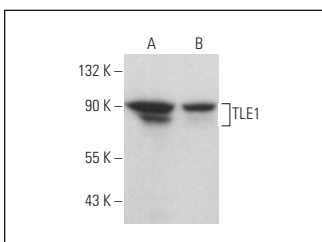
Molecular Weight of TLE1 migrating forms: 90-93 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, P19 cell lysate: sc-24760 or F9 cell lysate: sc-2245.

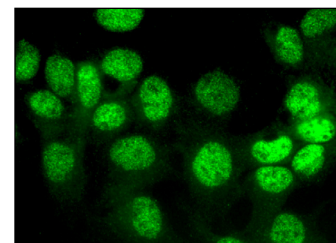
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



TLE1 (F-4): sc-137098. Western blot analysis of TLE1 expression in F9 (A) and c4 (B) whole cell lysates.



TLE1 (F-4): sc-137098. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Dibbern, M.E., et al. 2022. Microsecretory adenocarcinoma of the external ear canal. *J. Cutan. Pathol.* E-published.

RESEARCH USE

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

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA