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 (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


CHROMOSOMAL LOCATION

Genetic locus: TLE4 (human) mapping to 9q21.31; Tle4 (mouse) mapping to 19 A.

SOURCE

TLE4 (E-10) is a mouse monoclonal antibody raised against amino acids 273-473 of TLE4 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG1 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-365406X, 200 µg/0.1 ml.

TLE4 (E-10) is available conjugated to agarose (sc-365406 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365406 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-365406 PE), fluorescent (sc-365406 FITC), Alexa Fluor® 488 (sc-365406 AF488) or Alexa Fluor® 647 (sc-365406 AF647), 200 µg/ml, for IF, IHC(P) and FCM.

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STORAGE

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

APPLICATIONS

TLE4 (E-10) is recommended for detection of TLE4 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), immunohistochemistry (including paraffin-embedded sections) (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 TLE4 siRNA (h): sc-38562, TLE3 siRNA (m): sc-36684, TLE4 shRNA Plasmid (h): sc-36684-SH, TLE3 shRNA Plasmid (m): sc-36684-SH, TLE4 shRNA (h) Lentiviral Particles: sc-36562-V and TLE3 shRNA (m) Lentiviral Particles: sc-36684-V.

TLE4 (E-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of TLE4 isoforms 1/2/3: 84/77/88 kDa.

Molecular Weight (observed) of TLE4: 95 kDa.

Positive Controls: P19 cell lysate: sc-24760.

DATA

SELECT PRODUCT CITATIONS


RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.