

TLE5 (T-12): sc-69048

BACKGROUND

The Notch signaling pathway controls cellular interactions important for the specification of a variety of fates in both vertebrates and invertebrates. 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. TLE5, also known as AES (amino-terminal enhancer of split), GRG or ESP1, is a 197 amino acid nuclear protein that belongs to the TLE family. Expressed predominately in fetal brain, liver, lung, heart and kidney and in adult muscle, TLE5 functions as either a homo-oligomer or a heterooligomer with other TLE family members and, through this association, dominantly represses the expression of TLE genes. In addition, TLE5 can repress NF κ B-regulated gene expression and is thought to play an important role in initiating and maintaining cell differentiation events. Two isoforms of TLE5 exist due to alternative splicing events.

REFERENCES

- Miyasaka, H., Choudhury, B.K., Hou, E.W. and Li, S.S. 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.
- Hou, E.W. and Li, S.S. 1998. Genomic organization and chromosome localization to band 19p13.3 of the human AES gene: gene product exhibits strong similarity to the N-terminal domain of *Drosophila* enhancer of split groucho protein. *DNA Cell Biol.* 17: 911-913.
- Tetsuka, T., Uranishi, H., Imai, H., Ono, T., Sonta, S., Takahashi, N., Asamitsu, K. and Okamoto, T. 2000. Inhibition of nuclear factor- κ B-mediated transcription by association with the amino-terminal enhancer of split, a groucho-related protein lacking WD40 repeats. *J. Biol. Chem.* 275: 4383-4390.
- Wang, J.C., Waltner-Law, M., Yamada, K., Osawa, H., Stifani, S. and Granner, D.K. 2000. Transducin-like enhancer of split proteins, the human homologs of *Drosophila* groucho, interact with hepatic nuclear factor 3 β . *J. Biol. Chem.* 275: 18418-18423.
- Yochum, G.S. and Ayer, D.E. 2001. Pf1, a novel PHD zinc finger protein that links the TLE corepressor to the mSin3A-Histone deacetylase complex. *Mol. Cell. Biol.* 21: 4110-4118.
- López-Ríos, J., Tessmar, K., Loosli, F., Wittbrodt, J. and Bovolenta, P. 2003. Six3 and Six6 activity is modulated by members of the groucho family. *Development* 130: 185-195.
- Jan, Y., Matter, M., Pai, J.T., Chen, Y.L., Pilch, J., Komatsu, M., Ong, E., Fukuda, M. and Ruoslahti, E. 2004. A mitochondrial protein, Bit1, mediates apoptosis regulated by integrins and groucho/TLE corepressors. *Cell* 116: 751-762.

CHROMOSOMAL LOCATION

Genetic locus: AES (human) mapping to 19p13.3; Aes (mouse) mapping to 10 C1.

RESEARCH USE

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

SOURCE

TLE5 (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TLE5 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-69048 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TLE5 (T-12) is recommended for detection of TLE5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

TLE5 (T-12) is also recommended for detection of TLE5 in additional species, including canine.

Suitable for use as control antibody for TLE5 siRNA (h): sc-63133, TLE5 siRNA (m): sc-63134, TLE5 shRNA Plasmid (h): sc-63133-SH, TLE5 shRNA Plasmid (m): sc-63134-SH, TLE5 shRNA (h) Lentiviral Particles: sc-63133-V and TLE5 shRNA (m) Lentiviral Particles: sc-63134-V.

Molecular Weight of TLE5: 22 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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