

UTY (K-20): sc-83946

BACKGROUND

Tup1 and Ssn6 are yeast proteins that, after being recruited to different promoter regions by DNA-binding proteins, form a transcription repressor complex that regulates gene expression. The Groucho/transducin-like Enhancer of split (TLE) family is the vertebrate ortholog of the Tup family and is functionally paired with the vertebrate Ssn6-like protein UTY. UTY is a product of the ubiquitously transcribed tetratricopeptide-repeat genes found on the Y chromosome. Interacting with TLE1 or TLE2, UTY acts to regulate the expression of particular genes. A related gene, found on the X chromosome, encodes the UTX protein that functions in a similar manner.

REFERENCES

- Redd, M.J., Arnaud, M.B. and Johnson, A.D. 1997. A complex composed of Tup1 and Ssn6 represses transcription *in vitro*. *J. Biol. Chem.* 272: 11193-11197.
- Grbavec, D., Lo, R., Liu, Y. and Stifani, S. 1998. Transducin-like Enhancer of split 2, a mammalian homologue of *Drosophila* Groucho, acts as a transcriptional repressor, interacts with Hairy/Enhancer of split proteins, and is expressed during neuronal development. *Eur. J. Biochem.* 258: 339-349.
- Grbavec, D., Lo, R., Liu, Y., Greenfield, A. and Stifani, S. 1999. Groucho/transducin-like enhancer of split (TLE) family members interact with the yeast transcriptional co-repressor Ssn6 and mammalian Ssn6-related proteins: implications for evolutionary conservation of transcription repression mechanisms. *Biochem. J.* 337: 13-17.
- Mennella, T.A., Klinkenberg, L.G. and Zitomer, R.S. 2003. Recruitment of Tup1-Ssn6 by yeast hypoxic genes and chromatin-independent exclusion of TATA binding protein. *Eukaryotic Cell* 2: 1288-1303.
- Malavé, T.M. and Dent, S.Y. 2006. Transcriptional repression by Tup1-Ssn6. *Biochem. Cell Biol.* 84: 437-443.
- Bernard, S., Cajavec, B., Pujo-Menjouet, L., Mackey, M.C. and Herzog, H. 2006. Modelling transcriptional feedback loops: the role of Gro/TLE1 in HES1 oscillations. *Philos. Transact. A Math. Phys. Eng. Sci.* 364: 1155-1170.
- Terry, J., Saito, T., Subramanian, S., Ruttan, C., Antonescu, C.R., Goldblum, J.R., Downs-Kelly, E., Corless, C.L., Rubin, B.P., van de Rijn, M., Ladanyi, M. and Nielsen, T.O. 2007. TLE1 as a diagnostic immunohistochemical marker for synovial sarcoma emerging from gene expression profiling studies. *Am. J. Surg. Pathol.* 31: 240-246.

CHROMOSOMAL LOCATION

Genetic locus: UTY (human) mapping to Yq11.21.

STORAGE

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

SOURCE

UTY (K-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of UTY of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-83946 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

UTY (K-20) is recommended for detection of UTY of 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).

Suitable for use as control antibody for UTY siRNA (h): sc-91538, UTY shRNA Plasmid (h): sc-91538-SH and UTY shRNA (h) Lentiviral Particles: sc-91538-V.

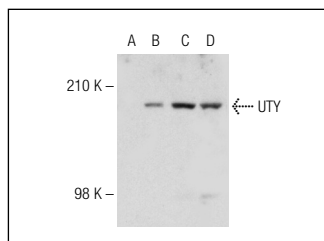
Molecular Weight of UTY: 150 kDa.

Positive Controls: UTY (m): 293T Lysate: sc-179653, MCF7 nuclear extract: sc-2149 or HeLa nuclear extract: sc-2120.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



UTY (K-20): sc-83946. Western blot analysis of UTY expression in non-transfected: sc-117752 (A) and mouse UTY transfected: sc-179653 (B) 293T whole cell lysates and HeLa (C) and MCF7 (D) nuclear extracts.

RESEARCH USE

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