

TCEAL1 (L-16): sc-162295

BACKGROUND

TCEAL1 (transcription elongation factor A (SII) protein 3), also known as p21, SIIR or pp21, is a member of the TFS-II family. Transcription elongation factors of the TFS-II family are responsible for releasing RNA polymerase II (Pol II) from transcriptional arrest. DNA arresting sites can result in locked ternary complexes if elongating RNA polymerases are trapped. Transcription elongation factors function to activate the intrinsic RNA cleavage activity of RNA polymerases. This allows the RNA polymerase to cleave the nascent transcript, thereby forming a new 3'-terminus to resume elongation. TCEAL1 is a 157 amino acid nuclear protein that is ubiquitously expressed. TCEAL1 may exert its effects via protein-protein interactions with other transcriptional regulators rather than via direct binding of DNA. Phosphorylation of TCEAL1 on Ser-36 and Ser-37 is critical for transcriptional repression.

REFERENCES

1. Yeh, C.H. and Shatkin, A.J. 1994. A HeLa-cell-encoded p21 is homologous to transcription elongation factor SII. *Gene* 143: 285-287.
2. Yeh, C.H. and Shatkin, A.J. 1994. Down-regulation of Rous sarcoma virus long terminal repeat promoter activity by a HeLa cell basic protein. *Proc. Natl. Acad. Sci. USA* 91: 11002-11006.
3. Gu, W. and Reines, D. 1995. Variation in the size of nascent RNA cleavage products as a function of transcript length and elongation competence. *J. Biol. Chem.* 270: 30441-30447.
4. Labhart, P. and Morgan, G.T. 1998. Identification of novel genes encoding transcription elongation factor TFIIS (TCEA) in vertebrates: conservation of three distinct TFIIS isoforms in frog, mouse, and human. *Genomics* 52: 278-288.
5. Pillutla, R.C., Shimamoto, A., Furuichi, Y. and Shatkin, A.J. 1999. Genomic structure and chromosomal localization of TCEAL1, a human gene encoding the nuclear phosphoprotein p21/SIIR. *Genomics* 56: 217-220.
6. Wind, M. and Reines, D. 2000. Transcription elongation factor SII. *Bioessays* 22: 327-336.
7. Kim, Y.B., Ki, S.W., Yoshida, M. and Horinouchi, S. 2000. Mechanism of cell cycle arrest caused by histone deacetylase inhibitors in human carcinoma cells. *J. Antibiot.* 53: 1191-1200.
8. Rodriguez, A., Jung, E.J., Yin, Q., Cayrol, C. and Flemington, E.K. 2001. Role of c-myc regulation in Zta-mediated induction of the cyclin-dependent kinase inhibitors p21 and p27 and cell growth arrest. *Virology* 284: 159-169.
9. Makino, H., Tajiri, T., Miyashita, M., Sasajima, K., Anbazhagan, R., Johnston, J. and Gabrielson, E. 2005. Differential expression of TCEAL1 in esophageal cancers by custom cDNA microarray analysis. *Dis. Esophagus* 18: 37-40.

CHROMOSOMAL LOCATION

Genetic locus: TCEAL1 (human) mapping to Xq22.2; Tceal1 (mouse) mapping to X F1.

SOURCE

TCEAL1 (L-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TCEAL1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-162295 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TCEAL1 (L-16) is recommended for detection of TCEAL1 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); non cross-reactive with other TCEAL family members.

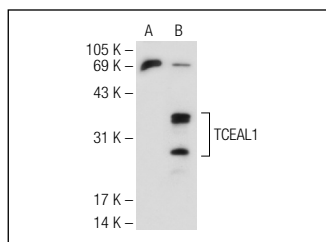
TCEAL1 (L-16) is also recommended for detection of TCEAL1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TCEAL1 siRNA (h): sc-91043, TCEAL1 siRNA (m): sc-154130, TCEAL1 shRNA Plasmid (h): sc-91043-SH, TCEAL1 shRNA Plasmid (m): sc-154130-SH, TCEAL1 shRNA (h) Lentiviral Particles: sc-91043-V and TCEAL1 shRNA (m) Lentiviral Particles: sc-154130-V.

Molecular Weight of TCEAL1: 21 kDa.

Positive Controls: TCEAL1 (h): 293T Lysate: sc-171670.

DATA



TCEAL1 (L-16): sc-162295. Western blot analysis of TCEAL1 expression in non-transfected: sc-117752 (A) and human TCEAL1 transfected: sc-171670 (B) 293T whole cell lysates.

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 or our catalog for detailed protocols and support products.