

TCEA2 (V-21): sc-134066

BACKGROUND

Initiation of transcription from protein-coding genes in eukaryotes is a complex process that requires RNA polymerase II (Pol II) and several basal transcription factors to form the preinitiation complex (PIC). After initiation, promotor-specific contacts between the PIC and Pol II are disrupted, thus allowing elongation (a process regulated by Pol II and several proteins called elongation factors) to begin. TCEA2 (transcription elongation factor A protein 2), also known as transcription elongation factor S-II protein 2, is a 299 amino acid elongation factor that is essential for proper elongation past DNA arresting sites. When template-encoded arresting sites trap elongating RNA polymerases, the transcription complex becomes locked, preventing efficient elongation. TCEA2 binds to Pol II and functions to cleave the nascent transcript, thereby unlocking the complex and allowing transcription to continue. TCEA2 is specifically expressed in testis and ovary, suggesting possible involvement in reproductive physiology.

REFERENCES

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- Weaver, Z.A. and Kane, C.M. 1997. Genomic characterization of a testis-specific TFIIIS (TCEA2) gene. *Genomics* 46: 516-519.
- Ito, T., et al. 2000. Gene structure and chromosome mapping of mouse transcription elongation factor S-II (TCEA1). *Gene* 244: 55-63.
- Sijbrandi, R., et al. 2002. RNA polymerase II complexes in the very early phase of transcription are not susceptible to TFIIIS-induced exonucleolytic cleavage. *Nucleic Acids Res.* 30: 2290-2298.
- Tamura, K., et al. 2003. Identification of EloA-BP1, a novel Elongin A binding protein with an exonuclease homology domain. *Biochem. Biophys. Res. Commun.* 309: 189-195.
- Scotto, L., et al. 2008. Identification of copy number gain and overexpressed genes on chromosome arm 20q by an integrative genomic approach in cervical cancer: potential role in progression. *Genes Chromosomes Cancer* 47: 755-765.

CHROMOSOMAL LOCATION

Genetic locus: TCEA2 (human) mapping to 20q13.33.

SOURCE

TCEA2 (V-21) is a Protein A purified rabbit polyclonal antibody raised against synthetic TCEA2 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

APPLICATIONS

TCEA2 (V-21) is recommended for detection of TCEA2 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TCEA2 siRNA (h): sc-106605, TCEA2 shRNA Plasmid (h): sc-106605-SH and TCEA2 shRNA (h) Lentiviral Particles: sc-106605-V.

Molecular Weight of TCEA2: 34 kDa.

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).

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.