

TFIIA- β (A-15): sc-5315

BACKGROUND

Initiation of transcription from protein-coding genes in eukaryotes is a complex process that requires RNA polymerase II, as well as families of basal transcription factors. Binding of the factor TFIID (TBP) to the TATA box is believed to be the first step in the formation of a multiprotein complex containing several additional factors, including TFIIA, TFIIB, TFIIE, TFIIIF and TFIIH. Recognition of the TATA binding element by TBP, one of the first steps in transcription initiation, may be regulated by TFIIA. TFIIA consists of three subunits designated TFIIA- α , TFIIA- β and TFIIA- γ , and it interacts with both TBP and a TAF (TBP-associated factor). It has been demonstrated that the basic region of TBP is essential for TFIIA-dependent function of TBP.

REFERENCES

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2. Buratowski, S., et al. 1989. Five intermediate complexes in transcription initiation by RNA polymerase II. *Cell* 56: 549-61.
3. Conaway, R.C., et al. 1989. An RNA polymerase II transcription factor has an associated DNA-dependent ATPase (dATPase) activity strongly stimulated by the TATA region of promoters. *Proc. Natl. Acad. Sci. USA* 86: 7356-7360.
4. Maldonado, E., et al. 1990. Factors involved in specific transcription by mammalian RNA polymerase II: role of transcription factors IIA, IID, and IIB during formation of a transcription-competent complex. *Mol. Cell. Biol.* 10: 6335-6347.
5. Gerard, M., et al. 1991. Purification and interaction properties of the human polymerase B II general transcription factor BTF2. *J. Biol. Chem.* 266: 20940-20945.
6. Flores, O., et al. 1992. Factors involved in specific transcription by mammalian RNA polymerase II. *J. Biol. Chem.* 267: 2786-2793.
7. Ozer, J., et al. 1994. Molecular cloning of the small γ subunit of human TFIIA reveals functions critical for activated transcription. *Genes Dev.* 8: 2324-2335.
8. DeJong, J., et al. 1995. Human general transcription factor TFIIA: characterization of a cDNA encoding the small subunit and requirement for basal and activated transcription. *Proc. Natl. Acad. Sci. USA* 92: 3313-3317.

CHROMOSOMAL LOCATION

Genetic locus: GTF2A1 (human) mapping to 14q31.1; Gtf2a1 (mouse) mapping to 12 E.

SOURCE

TFIIA- β (A-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TFIIA- β of human origin.

STORAGE

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

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-5315 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-5315 X, 200 μ g/0.1 ml.

APPLICATIONS

TFIIA- β (A-15) is recommended for detection of TFIIA- β (19 kDa) and p55 precursor 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).

Suitable for use as control antibody for TFIIA- α/β siRNA (h): sc-38517, TFIIA- α/β siRNA (m): sc-38518, TFIIA- α/β shRNA Plasmid (h): sc-38517-SH, TFIIA- α/β shRNA Plasmid (m): sc-38518-SH, TFIIA- α/β shRNA (h) Lentiviral Particles: sc-38517-V and TFIIA- α/β shRNA (m) Lentiviral Particles: sc-38518-V.

TFIIA- β (A-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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.

SELECT PRODUCT CITATIONS

1. Bier, C., et al. 2011. Cell-based analysis of structure-function activity of threonine aspartase 1. *J. Biol. Chem.* 286: 3007-3017.

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.