

TFIIA- α/β (708C4a): sc-81398

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 formation of the preinitiation complex (PIC) which contains several additional factors, including TFIIA, TFIIB, TFIIE, TFIIIF and TFIIH. Recognition of the TATA binding element by TBP may be regulated by TFIIA. TFIIA consists of three subunits designated TFIIA- α , TFIIA- β and TFIIA- γ , all of which associate with both TBP and TAF (TBP-associated factor). TFIIA functions to stabilize the interaction between TFIID and DNA by binding directly to TBP and the DNA (at the TATA box), thus forming a TBP/TFIIA/TATA complex which mediates the transcriptional output of a gene.

REFERENCES

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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.
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5. Flores, O., et al. 1992. Factors involved in specific transcription by mammalian RNA polymerase II. *J. Biol. Chem.* 267: 2786-2793.
6. 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.
7. Han, S.Y., et al. 2001. TFIIA- α/β -like factor is encoded by a germ cell-specific gene whose expression is upregulated with other general transcription factors during spermatogenesis in the mouse. *Biol. Reprod.* 64: 507-517.
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CHROMOSOMAL LOCATION

Genetic locus: GTF2A1 (human) mapping to 14q31.1; Gtf2a1 (mouse) mapping to 12 D3.

SOURCE

TFIIA- α/β (708C4a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a region near the N-terminus of TFIIA- α/β of human origin.

PRODUCT

Each vial contains 100 μ g in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

APPLICATIONS

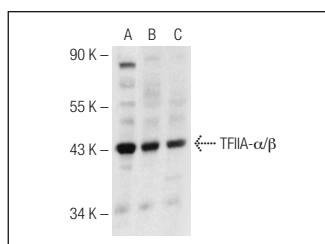
TFIIA- α/β (708C4a) is recommended for detection of TFIIA- α (35 kDa) of mouse, rat and human origin and TFIIA- β (19 kDa) of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

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

Molecular Weight of TFIIA- α/β : 41 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

DATA



TFIIA- α/β (708C4a): sc-81398. Western blot analysis of TFIIA- α/β expression in Jurkat (A), Hep G2 (B) and HeLa (C) whole cell lysates.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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

PROTOCOLS

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