SANTA CRUZ BIOTECHNOLOGY, INC.

TFIIE-β (359C2a): sc-81400

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

In eukaryotic systems, initiation of transcription from protein-coding genes is a complex process requiring RNA polymerase II and broad families of auxiliary transcription factors. Such factors can be divided into two major functional classes: the basal factors that are required for transcription of all Pol II genes, including TFIIA, TFIIB, TFIID, TFIIE, TFIIF and TFIIH; and sequence-specific factors that regulate gene expression. The basal transcription factors and Pol II form a specific multiprotein complex near the transcription start site by interacting with core promotor elements such as the TATA box generally located 25-30 base pairs upstream of the transcription start site. Human TFIIE consists of two subunits, α and β. The structure of TFIIE appears to be a heterotetramer (α2β2); both subunits are required for optimal basal-level transcription.

REFERENCES

1. 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.
2. Peterson, M.G., et al. 1990. Functional domains and upstream activation properties of cloned human TATA binding protein. Science 248: 1625-1630.
3. Peterson, M.G., et al. 1991. Structure and functional properties of human general transcription factor IIE. Nature 354: 369-373.
4. Ohkuma, Y., et al. 1991. Structural motifs and potential s homologies in the large subunit of human general transcription factor TFIIE. Nature 354: 398-400.
5. Sumimoto, H., et al. 1991. Conserved sequence motifs in the small subunit of human general transcription factor TFIIE. Nature 354: 401-404.
6. Lee, D.K., et al. 1992. TFIIA induces conformational changes in TFIID via interactions with the basic repeat. Mol. Cell. Biol. 12: 5189-5196.

CHROMOSOMAL LOCATION

Genetic locus: GTF2E2 (human) mapping to 8p12; Gtf2e2 (mouse) mapping to 8 A3.

SOURCE

TFIIE-β (359C2a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a region near the C-terminus of TFIIE-β of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml PBS with < 0.1% sodium azide and 1.0% BSA.

STORAGE

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

APPLICATIONS

TFIIE-β (359C2a) is recommended for detection of TFIIE-β p34 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for TFIIE-β siRNA (h): sc-36650, TFIIE-β siRNA (m): sc-36649, TFIIE-β shRNA Plasmid (h): sc-36650-SH, TFIIE-β shRNA Plasmid (m): sc-36649-SH, TFIIE-β shRNA (h) Lentiviral Particles: sc-36650-V and TFIIE-β shRNA (m) Lentiviral Particles: sc-36649-V.

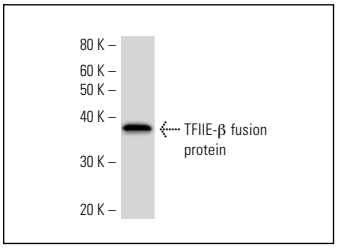
Molecular Weight of TFIIE-β: 34 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, TFIIE-β (m): 293T Lysate: sc-124003 or HL-60 whole cell lysate: sc-2209.

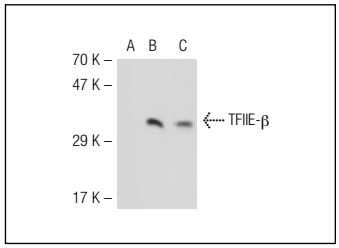
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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).

DATA



TFIIE-β (359C2a): sc-81400 Western Blot analysis of human recombinant TFIIE-β fusion protein.



TFIIE-β (359C2a): sc-81400. Western blot analysis of TFIIE-β expression in non-transfected 293T: sc-117752 (**A**), mouse TFIIE-β transfected 293T: sc-124003 (**B**) and HL-60 (**C**) whole cell lysates.

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.