

TFIIE- β (H-291): sc-6935

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 promoter elements such as the TATA box generally located 25-30 base pairs upstream of the transcription start site. Human TFIIE consists of two subunits of 56 kDa and 34 kDa molecular weight, respectively. The structure of TFIIE appears to be a heterotetramer ($\alpha_2\beta_2$), both subunits being required for optimal basal-level transcription.

REFERENCES

- Peterson, M.G., et al. 1991. Structure and functional properties of human general transcription factor IIE. *Nature* 354: 369-373.
- 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.
- Peterson, M.G., et al. 1990. Functional domains and upstream activation properties of cloned human TATA binding protein. *Science* 248: 1625-1630.
- Ohkuma, Y., et al. 1991. Structural motifs and potential homologies in the large subunit of human general transcription factor TFIIE. *Nature* 354: 398-400.
- Sumimoto, H., et al. 1991. Conserved sequence motifs in the small subunit of human general transcription factor TFIIE. *Nature* 354: 401-404.
- 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 (H-291) is a rabbit polyclonal antibody raised against amino acids 1-291 of TFIIE- β of human origin.

PRODUCT

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

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-6935 X, 200 μ g/0.1 ml.

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 (H-291) is recommended for detection of TFIIE- β p34 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

TFIIE- β (H-291) is also recommended for detection of TFIIE- β p34 in additional species, including equine, canine, bovine and porcine.

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.

TFIIE- β (H-291) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

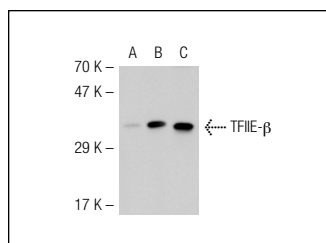
Molecular Weight of TFIIE- β : 34 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

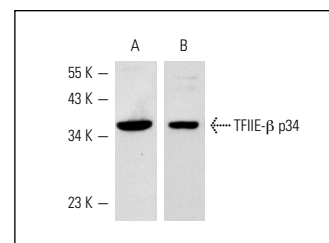
RECOMMENDED SECONDARY REAGENTS

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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



TFIIE- β (H-291): sc-6935. 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.



Western blot analysis of TFIIE- β p34 expression in HeLa whole cell lysates (A,B). Antibodies tested include TFIIE- β (C-21): sc-238 (A) and TFIIE- β (H-291): sc-6935 (B).

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.