SANTA CRUZ BIOTECHNOLOGY, INC.

TFIIE-β (C-21): sc-238

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 ($\alpha_2\beta_2$); both subunits are required for optimal basal-level transcription.

CHROMOSOMAL LOCATION

Genetic locus: GTF2E2 (human) mapping to 8p12; Gtf2e2 (mouse) mapping to 8 A4.

SOURCE

TFIIE-β (C-21) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of TFIIE-β of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-238 P, (100 µg 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-238 X, 200 µg/0.1 ml.

APPLICATIONS

TFIIE-β (C-21) 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 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 (C-21) 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 (C-21) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

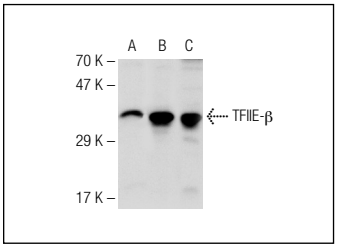
Molecular Weight of TFIIE-β: 34 kDa.

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

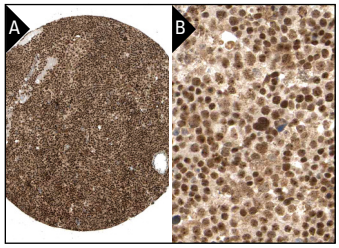
STORAGE

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

DATA



TFIIE-β (C-21): sc-238. 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.



TFIIE β (C-21): sc-238. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urothelial cancer tissue showing nuclear and cytoplasmic staining of tumor cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Park, C., et al. 1995. The general transcription-repair factor TFIIH is recruited to the excision repair complex by the XPA protein independent of the TFIIE transcription factor. J. Biol. Chem. 270: 4896-4902.
2. Hermann, D.M., et al. 2001. Adenovirus-mediated GDNF and CNTF pretreatment protects against striatal injury following transient middle cerebral artery occlusion in mice. Neurobiol. Dis. 8: 655-666.
3. Cabart, P., et al. 2004. BRCA1 cooperates with NUFIP and P-TEFβ to activate transcription by RNA polymerase II. Oncogene 23: 5316-5329.
4. Lin, Y.C., et al. 2005. Stimulation of the XPB ATP-dependent helicase by the β subunit of TFIIE. Nucleic Acids Res. 33: 3072-3081.
5. Vernimmen, D., et al. 2007. Long-range chromosomal interactions regulate the timing of the transition between poised and active gene expression. EMBO J. 26: 2041-2051.
6. Fong, Y.W., et al. 2011. A DNA repair complex functions as an oct4/sox2 coactivator in embryonic stem cells. Cell 147: 120-131.

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.