

TFIIE- α (B-7): sc-374014

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, 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.

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 α 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.

CHROMOSOMAL LOCATION

Genetic locus: GTF2E1 (human) mapping to 3q13.33; Gtf2e1 (mouse) mapping to 16 B3.

SOURCE

TFIIE- α (B-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 417-439 at the C-terminus of TFIIE- α of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-374014 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-374014 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

TFIIE- α (B-7) is recommended for detection of TFIIE- α p57 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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- α (B-7) is also recommended for detection of TFIIE- α p57 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for TFIIE- α siRNA (h): sc-36651, TFIIE- α siRNA (m): sc-36652, TFIIE- α shRNA Plasmid (h): sc-36651-SH, TFIIE- α shRNA Plasmid (m): sc-36652-SH, TFIIE- α shRNA (h) Lentiviral Particles: sc-36651-V and TFIIE- α shRNA (m) Lentiviral Particles: sc-36652-V.

TFIIE- α (B-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

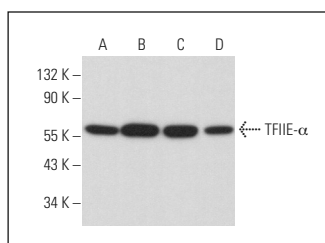
Molecular Weight of TFIIE- α : 57 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

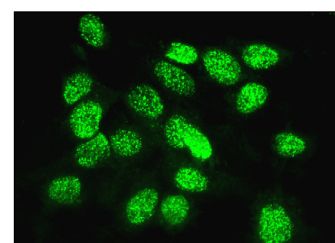
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



TFIIE- α (B-7): sc-374014. Western blot analysis of TFIIE- α expression in Jurkat (A), HeLa (B), A-431 (C) and EOC 20 (D) whole cell lysates.



TFIIE- α (B-7): sc-374014. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Su Mo, J. and Cheon Chae, S. 2021. MicroRNA 452 regulates GTF2E1 expression in colorectal cancer cells. *J. Genet.* 100: 62.

RESEARCH USE

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