SANTA CRUZ BIOTECHNOLOGY, INC.

TFIIH p44 (GTF2F6A10): sc-81402

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 the formation of a multiprotein complex containing several additional factors, including TFIIA, TFIIB, TFIIE, TFIIF and TFII. TFIIH (or BTF2) is a multisubunit transcription/DNA repair factor that possesses several enzymatic activities. The core of TFIIH is composed of five subunits, designated p89 (XPB or ERCC3), p62, p52, p44 and p34. Additional subunits of the TFIIH complex are p80 (XPD or ERCC2) and the ternary kinase complex composed of Cdk7, cyclin H and Mat1. Both p89 and p80 have ATP-dependent helicase activity. The p62, p52 and p44 subunits have been shown to be involved in nucleotide excision repair.

REFERENCES

1. 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.
2. Weeda, G., et al. 1990. A presumed DNA helicase encoded by ERCC3 is involved in the human repair disorders xeroderma pigmentosum and Cockayne's syndrome. Cell 62: 777-791.
3. Weber, C.A., et al. 1990. ERCC2: cDNA cloning and molecular characterization of a human nucleotide excision repair gene with high homology to yeast Rad3. EMBO J. 9: 1437-1447.
4. Fischer, L., et al. 1991. Cloning of the 62 kDa component of basic transcription factor BTF2. Science 257: 1392-1395.
5. Gerard, M., et al. 1991. Purification and interaction properties of the human polymerase B II general transcription factor BTF2. J. Biol. Chem. 266: 20940-20945.
6. Flores, O., et al. 1992. Factors involved in specific transcription by mammalian RNA polymerase II. J. Biol. Chem. 267: 2786-2793.
7. Humbert, S., et al. 1994. p44 and p34 subunits of the STF2/TFIIH transcription factor have homologies with SSL1, a yeast protein involved in DNA repair. EMBO J. 13: 2393-2398.
8. Marinoni, J.C., et al. 1997. Cloning and characterization of p52, the fifth subunit of the core of the transcription/DNA repair factor TFIIH. EMBO J. 16: 1093-1102.

CHROMOSOMAL LOCATION

Genetic locus: GTF2H2 (human) mapping to 5q13.2; Gtf2h2 (mouse) mapping to 13 D1.

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.

SOURCE

TFIIH p44 (GTF2F6A10) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of TFIIH p44 of human origin.

PRODUCT

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

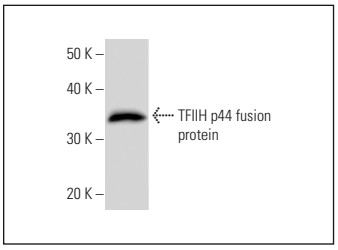
APPLICATIONS

TFIIH p44 (GTF2F6A10) is recommended for detection of TFIIH p44 of mouse, rat 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)]; may cross-react with TFIIH p44L.

Suitable for use as control antibody for TFIIH p44 siRNA (h): sc-38526, TFIIH p44 siRNA (m): sc-38527, TFIIH p44 shRNA Plasmid (h): sc-38526-SH, TFIIH p44 shRNA Plasmid (m): sc-38527-SH, TFIIH p44 shRNA (h) Lentiviral Particles: sc-38526-V and TFIIH p44 shRNA (m) Lentiviral Particles: sc-38527-V.

Positive Controls: Jurkat nuclear extract: sc-2132.

DATA



TFIIH p44 (GTF2F6A10): sc-81402. Western Blot analysis of human recombinant TFIIH p44 fusion protein.

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.