

TFIIH p80 (m): 293T Lysate: sc-127645

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 TFIIH. 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: Ercc2 (mouse) mapping to 7 A3.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

TFIIH p80 (m): 293T Lysate represents a lysate of mouse TFIIH p80 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

TFIIH p80 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive TFIIH p80 antibodies. Recommended use: 10-20 µl per lane.

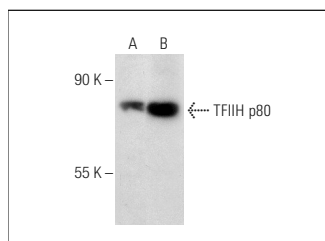
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

TFIIH p80 (184.7): sc-101174 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse TFIIH p80 expression in TFIIH p80 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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.

DATA



TFIIH p80 (184.7): sc-101174. Western blot analysis of TFIIH p80 expression in non-transfected: sc-117752 (A) and mouse TFIIH p80 transfected: sc-127645 (B) 293T whole cell lysates.

RESEARCH USE

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