SANTA CRUZ BIOTECHNOLOGY, INC.

TFIIH p52 (A-2): sc-271742

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. 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.
5. Fischer, L., et al. 1992. Cloning of the 62-kilodalton component of basic transcription factor BTF-2. Science 257: 1392-1395.

CHROMOSOMAL LOCATION

Genetic locus: GTF2H4 (human) mapping to 6p21.33; Gtf2h4 (mouse) mapping to 17 B1.

SOURCE

TFIIH p52 (A-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 431-462 at the C-terminus of TFIIH p52 of human origin.

PRODUCT

Each vial contains 200 µg IgA 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-271742 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-271742 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

TFIIH p52 (A-2) is recommended for detection of TFIIH p52 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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). TFIIH p52 (A-2) is also recommended for detection of TFIIH p52 in additional species, including canine and porcine.

Suitable for use as control antibody for TFIIH p52 siRNA (h): sc-38528, TFIIH p52 siRNA (m): sc-38529, TFIIH p52 shRNA Plasmid (h): sc-38528-SH, TFIIH p52 shRNA Plasmid (m): sc-38529-SH, TFIIH p52 shRNA (h) Lentiviral Particles: sc-38528-V and TFIIH p52 shRNA (m) Lentiviral Particles: sc-38529-V.

TFIIH p52 (A-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

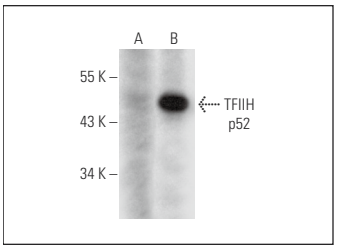
Molecular Weight of TFIIH p52: 52 kDa.

Positive Controls: TFIIH p52 (m): 293T Lysate: sc-124008 or Jurkat nuclear extract: sc-2132.

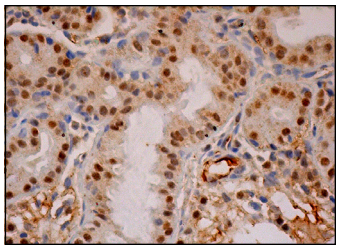
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



TFIIH p52 (A-2): sc-271742. Western blot analysis of TFIIH p52 expression in non-transfected: sc-117752 (**A**) and mouse TFIIH p52 transfected: sc-124008 (**B**) 293T whole cell lysates.



TFIIH p52 (A-2): sc-271742. Immunoperoxidase staining of formalin fixed, paraffin-embedded human salivary gland tissue showing nuclear and cytoplasmic staining of glandular cells.

STORAGE

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