SANTA CRUZ BIOTECHNOLOGY, INC.

TFIIH p52 (A-10): sc-514448

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 ERCC-3 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-kilodalton component of basic transcription factor BTF-2. 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.

CHROMOSOMAL LOCATION

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

SOURCE

TFIIH p52 (A-10) is a mouse monoclonal antibody raised against amino acids 20-319 mapping near the N-terminus of TFIIH p52 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TFIIH p52 (A-10) is available conjugated to agarose (sc-514448 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514448 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514448 PE), fluorescein (sc-514448 FITC), Alexa Fluor® 488 (sc-514448 AF488), Alexa Fluor® 546 (sc-514448 AF546), Alexa Fluor® 594 (sc-514448 AF594) or Alexa Fluor® 647 (sc-514448 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514448 AF680) or Alexa Fluor® 790 (sc-514448 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

TFIIH p52 (A-10) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

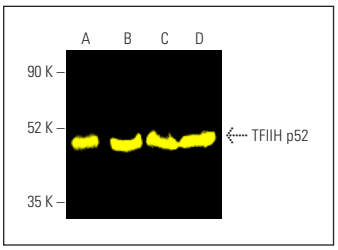
Molecular Weight of TFIIH p52: 52 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, F9 cell lysate: sc-2245 or rat testis extract: sc-2400.

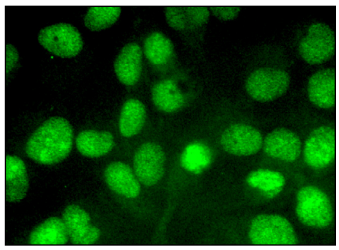
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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.

DATA



TFIIH p52 (A-10): sc-514448. Fluorescent western blot analysis of TFIIH p52 expression in ARPE-19 (**A**), K-562 (**B**) and F9 (**C**) whole cell lysates and rat testis tissue extract (**D**). Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_{2a} BP-CFL 488: sc-542735.



TFIIH p52 (A-10): sc-514448. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

STORAGE

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

RESEARCH USE

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