SANTA CRUZ BIOTECHNOLOGY, INC.

TFIIH p62 (H-10): sc-25329

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. and Conaway, J.W. 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.

CHROMOSOMAL LOCATION

Genetic locus: GTF2H1 (human) mapping to 11p15.1; Gtf2h1 (mouse) mapping to 7 B4.

SOURCE

TFIIH p62 (H-10) is a mouse monoclonal antibody raised against amino acids 249-548 of TFIIH p62 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-25329 X, 200 µg/0.1 ml.

TFIIH p62 (H-10) is available conjugated to agarose (sc-25329 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-25329 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-25329 PE), fluorescein (sc-25329 FITC), Alexa Fluor® 488 (sc-25329 AF488), Alexa Fluor® 546 (sc-25329 AF546), Alexa Fluor® 594 (sc-25329 AF594) or Alexa Fluor® 647 (sc-25329 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-25329 AF680) or Alexa Fluor® 790 (sc-25329 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

TFIIH p62 (H-10) is recommended for detection of TFIIH p62 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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).

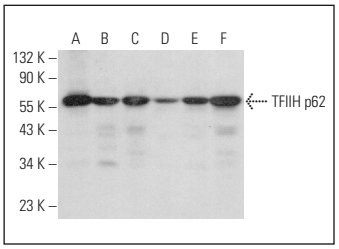
Suitable for use as control antibody for TFIIH p62 siRNA (h): sc-38530, TFIIH p62 siRNA (m): sc-38531, TFIIH p62 shRNA Plasmid (h): sc-38530-SH, TFIIH p62 shRNA Plasmid (m): sc-38531-SH, TFIIH p62 shRNA (h) Lentiviral Particles: sc-38530-V and TFIIH p62 shRNA (m) Lentiviral Particles: sc-38531-V.

TFIIH p62 (H-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

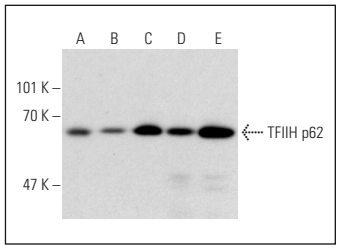
Molecular Weight of TFIIH p62: 62 kDa.

Positive Controls: C32 nuclear extract: sc-2136, PC-3 nuclear extract: sc-2152 or F9 cell lysate: sc-2245.

DATA



TFIIH p62 (H-10): sc-25329. Western blot analysis of TFIIH p62 expression in HeLa nuclear extract (**A**) and NAMALWA (**B**), PC-12 (**C**), NIH/3T3 (**D**), GA-10 (**E**) and F9 (**F**) whole cell lysates.



TFIIH p62 (H-10): sc-25329. Western blot analysis of TFIIH p62 expression in F9 whole cell lysate (**A**) and C32 (**B**), PC-3 (**C**), HL-60 (**D**) and THP-1 (**E**) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Solarczyk, K.J., et al. 2012. Inducing local DNA damage by visible light to study chromatin repair. DNA Repair 11: 996-1002.
2. Shi, W., et al. 2018. Saikosaponin-d inhibits proliferation by up-regulating autophagy via the CaMKKβ-AMPK-mTOR pathway in ADPKD cells. Mol. Cell. Biochem. 449: 219-226.
3. Hu, J., et al. 2019. Genome-wide mapping of nucleotide excision repair with XR-seq. Nat. Protoc. 14: 248-282.
4. van der Weegen, Y., et al. 2020. The cooperative action of CSB, CSA, and UVSSA target TFIIH to DNA damage-stalled RNA polymerase II. Nat. Commun. 11: 2104.
5. Luo, J., et al. 2021. Autophagy induced by *H. pylori* VacA regulated the survival mechanism of the SGC7901 human gastric cancer cell line. Genes Genomics 43: 1223-1230.

RESEARCH USE

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