SANTA CRUZ BIOTECHNOLOGY, INC.

TFIIH p80 (H-150): sc-20696

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 5 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.

CHROMOSOMAL LOCATION

Genetic locus: ERCC2 (human) mapping to 19q13.32; Ercc2 (mouse) mapping to 7 A3.

SOURCE

TFIIH p80 (H-150) is a rabbit polyclonal antibody raised against amino acids 611-760 mapping at the C-terminus of TFIIH p80 of human origin.

PRODUCT

Each vial contains 200 µg IgG 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-20696 X, 200 µg/0.1 ml.

APPLICATIONS

TFIIH p80 (H-150) is recommended for detection of TFIIH p80 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 p80 (H-150) is also recommended for detection of TFIIH p80 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TFIIH p80 siRNA (h): sc-36653, TFIIH p80 siRNA (m): sc-36654, TFIIH p80 shRNA Plasmid (h): sc-36653-SH, TFIIH p80 shRNA Plasmid (m): sc-36654-SH, TFIIH p80 shRNA (h) Lentiviral Particles: sc-36653-V and TFIIH p80 shRNA (m) Lentiviral Particles: sc-36654-V.

TFIIH p80 (H-150) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TFIIH p80: 80 kDa.

Positive Controls: TFIIH p80 (h): 293T Lysate: sc-111706, K-562 whole cell lysate: sc-2203 or TFIIH p80 (m): 293T Lysate: sc-127645 .

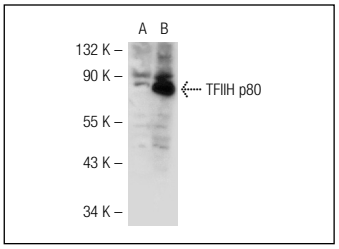
RESEARCH USE

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

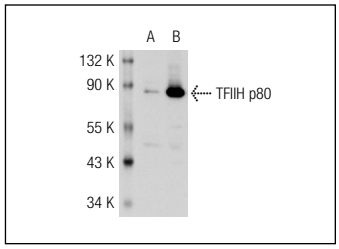
STORAGE

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

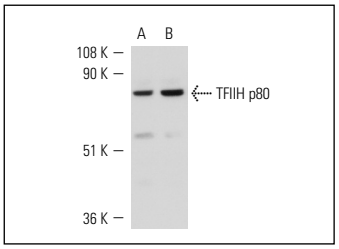
DATA



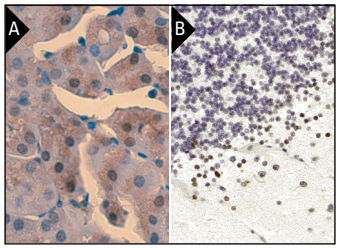
TFIIH p80 (H-150): sc-20696. Western blot analysis of TFIIH p80 expression in non-transfected 293T: sc-117752 (**A**) and mouse TFIIH p80 transfected 293T: sc-127645 (**B**) whole cell lysates.



TFIIH p80 (H-150): sc-20696. Western blot analysis of TFIIH p80 expression in non-transfected: sc-117752 (**A**) and human TFIIH p80 transfected: sc-111706 (**B**) 293T whole cell lysates.



TFIIH p80 (H-150): sc-20696. Western blot analysis of TFIIH p80 expression in A-431 (**A**) and K-562 (**B**) nuclear extracts.



TFIIH p80 (H-150): sc-20696. Immunoperoxidase staining of formalin-fixed, paraffin-embedded mouse kidney tissue showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing nuclear staining of cells in molecular layer. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Kim, Y.K., et al. 2006. Recruitment of TFIIH to the HIV LTR is a rate-limiting step in the emergence of HIV from latency. EMBO J. 25: 3596-3604.
2. Aune, G.J., et al. 2008. Von Hippel-Lindau-coupled and transcription-coupled nucleotide excision repair-dependent degradation of RNA polymerase II in response to trabectedin. Clin. Cancer Res. 14: 6449-6455.
3. Zhu, Q., et al. 2012. Lack of CAK complex accumulation at DNA damage sites in XP-B and XP-B/CS fibroblasts reveals differential regulation of CAK anchoring to core TFIIH by XPB and XPD helicases during nucleotide excision repair. DNA Repair 11: 942-950.