SANTA CRUZ BIOTECHNOLOGY, INC.

# TFIIH p80 (G-2): sc-271206

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. 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. 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.
3. 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.
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.


## CHROMOSOMAL LOCATION

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

## SOURCE

TFIIH p80 (G-2) is a mouse monoclonal antibody raised against amino acids 611-760 mapping at the C-terminus of TFIIH p80 of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ 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-271206 X, 200 µg/0.1 ml.

TFIIH p80 (G-2) is available conjugated to agarose (sc-271206 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271206 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271206 PE), fluorescein (sc-271206 FITC), Alexa Fluor® 488 (sc-271206 AF488), Alexa Fluor® 546 (sc-271206 AF546), Alexa Fluor® 594 (sc-271206 AF594) or Alexa Fluor® 647 (sc-271206 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271206 AF680) or Alexa Fluor® 790 (sc-271206 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.



## APPLICATIONS

TFIIH p80 (G-2) is recommended for detection of TFIIH p80 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 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 (G-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

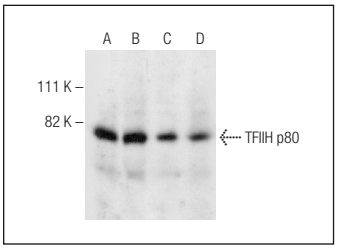
Molecular Weight of TFIIH p80: 80 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-431 whole cell lysate: sc-2201 or MCF7 whole cell lysate: sc-2206.

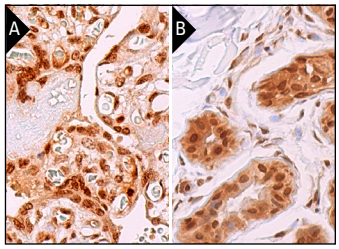
## RECOMMENDED SUPPORT REAGENTS

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 p80 (G-2): sc-271206. Western blot analysis of TFIIH p80 expression in NIH/3T3 (**A**), HeLa (**B**), A-431 (**C**) and MCF7 (**D**) whole cell lysates.




TFIIH p80 (G-2): sc-271206. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear and cytoplasmic staining of trophoblastic cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human sweat gland tissue showing nuclear and cytoplasmic staining of glandular cells (**B**).

## 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.