

TFIIF RAP 30 (G-3): sc-374304

BACKGROUND

In eukaryotic systems, initiation of transcription from protein-coding genes is a complex process requiring RNA polymerase II and broad families of auxiliary transcription factors. Such factors can be divided into two major functional classes: the basal factors that are required for transcription of all Pol II genes, including TFIIA, TFIIB, TFIID, TFIIE, TFIIF and TFIIH; and sequence-specific factors that regulate gene expression. The basal transcription factors and Pol II form a specific multiprotein complex near the transcription start site by interacting with core promoter elements such as the TATA box generally located 25-30 base pairs upstream of the transcription start site. TFIIF, a heteromer composed of a small (RAP 30) and a large (RAP 74) subunit, is required for RNA polymerase II to assemble into a preinitiation complex formed by promoter DNA and the general factors TFIID, TFIIA and TFIIB. In addition, TFIIF stimulates transcription elongation by RNA polymerase II.

REFERENCES

1. Sopta, M., et al. 1989. Structure and associated DNA-helicase activity of a general transcription initiation factor that binds to RNA polymerase II. *Nature* 341: 410-414.
2. Maldonado, E., et al. 1990. Factors involved in specific transcription by mammalian RNA polymerase II: role of transcription factors TFIIA, TFIID, and TFIIB during formation of a transcription-competent complex. *Mol. Cell. Biol.* 10: 6335-6347.
3. Peterson, M.G., et al. 1990. Functional domains and upstream activation properties of cloned human TATA binding protein. *Science* 248: 1625-1630.
4. Peterson, M.G., et al. 1991. Structure and functional properties of human general transcription factor TFIIE. *Nature* 354: 369-373.

CHROMOSOMAL LOCATION

Genetic locus: GTF2F2 (human) mapping to 13q14.12; Gtf2f2 (mouse) mapping to 14 D3.

SOURCE

TFIIF RAP 30 (G-3) is a mouse monoclonal antibody raised against amino acids 102-249 mapping near the C-terminus of TFIIF RAP 30 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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-374304 X, 200 µg/0.1 ml.

TFIIF RAP 30 (G-3) is available conjugated to agarose (sc-374304 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374304 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374304 PE), fluorescein (sc-374304 FITC), Alexa Fluor® 488 (sc-374304 AF488), Alexa Fluor® 546 (sc-374304 AF546), Alexa Fluor® 594 (sc-374304 AF594) or Alexa Fluor® 647 (sc-374304 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374304 AF680) or Alexa Fluor® 790 (sc-374304 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

TFIIF RAP 30 (G-3) is recommended for detection of TFIIF RAP 30 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 TFIIF RAP 30 siRNA (h): sc-38521, TFIIF RAP 30 siRNA (m): sc-38522, TFIIF RAP 30 shRNA Plasmid (h): sc-38521-SH, TFIIF RAP 30 shRNA Plasmid (m): sc-38522-SH, TFIIF RAP 30 shRNA (h) Lentiviral Particles: sc-38521-V and TFIIF RAP 30 shRNA (m) Lentiviral Particles: sc-38522-V.

TFIIF RAP 30 (G-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

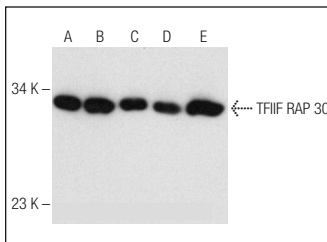
Molecular Weight of TFIIF RAP 30: 30 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, Jurkat nuclear extract: sc-2132 or HeLa nuclear extract: sc-2120.

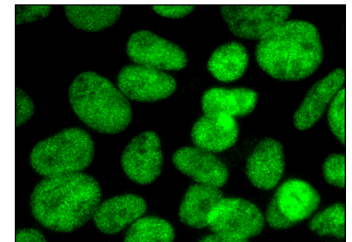
RECOMMENDED SUPPORT REAGENTS

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



TFIIF RAP 30 (G-3): sc-374304. Western blot analysis of TFIIF RAP 30 expression in K-562 (A), Jurkat (B), A-431 (C), HeLa (D) and U-937 (E) nuclear extracts.



TFIIF RAP 30 (G-3): sc-374304. 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.