

TFIIF RAP 30 (Y-21): sc-134081

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, TFII E, 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.
5. Lee, D.K., et al. 1992. TFIIA induces conformational changes in TFIID via interactions with the basic repeat. *Mol. Cell. Biol.* 12: 5189-5196.
6. Aso, T., et al. 1992. Characterization of cDNA for the large subunit of the transcription initiation factor TFIIF. *Nature* 355: 461-467.
7. Yonaha, M., et al. 1993. Domain structure of a human general transcription initiation factor, TFIIF. *Nucleic Acids Res.* 21: 273-279.

CHROMOSOMAL LOCATION

Genetic locus: GTF2F2 (human) mapping to 13q14.12.

SOURCE

TFIIF RAP 30 (Y-21) is an affinity purified rabbit polyclonal antibody raised against synthetic TFIIF RAP 30 peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

APPLICATIONS

TFIIF RAP 30 (Y-21) is recommended for detection of TFIIF RAP 30 of human and canine 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).

Suitable for use as control antibody for TFIIF RAP 30 siRNA (h): sc-38521, TFIIF RAP 30 shRNA Plasmid (h): sc-38521-SH and TFIIF RAP 30 shRNA (h) Lentiviral Particles: sc-38521-V.

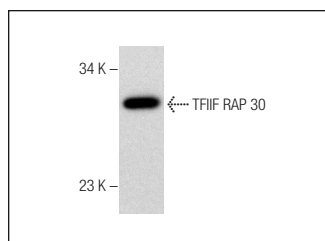
Molecular Weight of TFIIF RAP 30: 30 kDa.

Positive Controls: K-562 nuclear extract: sc-2130 or HeLa whole cell lysate: sc-2200.

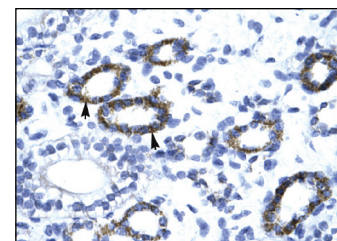
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



TFIIF RAP 30 (Y-21): sc-134081. Western blot analysis of TFIIF RAP 30 expression in K-562 nuclear extract.



TFIIF RAP 30 (Y-21): sc-134081. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human kidney tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Cabart, P., et al. 2011. Transcription factor TFIIF is not required for initiation by RNA polymerase II, but it is essential to stabilize transcription factor TFIIB in early elongation complexes. *Proc. Natl. Acad. Sci. USA* 108: 15786-15791.

RESEARCH USE

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