

# TFIIF RAP 30 (Q-19): sc-69030

## 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, IIA and IIB. 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 IIA, IID, and IIB 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 IIE. *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. *Nucl. Acids Res.* 21: 273-279.

## CHROMOSOMAL LOCATION

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

## SOURCE

TFIIF RAP 30 (Q-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TFIIF RAP 30 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.

Blocking peptide available for competition studies, sc-69030 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TFIIF RAP 30 (Q-19) is recommended for detection of TFIIF RAP 30 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

TFIIF RAP 30 (Q-19) is also recommended for detection of TFIIF RAP 30 in additional species, including equine, canine, bovine, porcine and avian.

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 (C-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TFIIF RAP 30: 30 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.