

p-TFIIF RAP 74 (Ser 385/Thr 389)-R: sc-16793-R

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 TFIIFH; 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

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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. Aso, T., et al. 1992. Characterization of cDNA for the large subunit of the transcription initiation factor TFIIF. *Nature* 355: 461-467.
6. Lee, D.K., et al. 1992. TFIIA induces conformational changes in TFIID via interactions with the basic repeat. *Mol. Cell. Biol.* 12: 5189-5196.
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CHROMOSOMAL LOCATION

Genetic locus: GTF2F1 (human) mapping to 19p13.3; Gtf2f1 (mouse) mapping to 17 D.

SOURCE

p-TFIIF RAP 74 (Ser 385/Thr 389)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Ser 385 and Thr 389 of TFIIF RAP 74 of human origin.

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.

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-16793 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-TFIIF RAP 74 (Ser 385/Thr 389)-R is recommended for detection of Ser 385 and Thr 389 dually phosphorylated TFIIF RAP74 of mouse 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

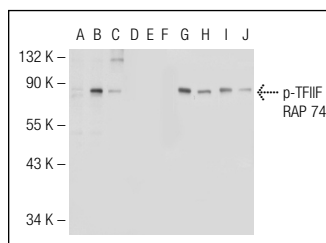
p-TFIIF RAP 74 (Ser 385/Thr 389)-R is also recommended for detection of correspondingly phosphorylated Ser and Thr on TFIIF RAP74 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for TFIIF RAP 74 siRNA (h): sc-38523, TFIIF RAP 74 siRNA (m): sc-38524, TFIIF RAP 74 shRNA Plasmid (h): sc-38523-SH, TFIIF RAP 74 shRNA Plasmid (m): sc-38524-SH, TFIIF RAP 74 shRNA (h) Lentiviral Particles: sc-38523-V and TFIIF RAP 74 shRNA (m) Lentiviral Particles: sc-38524-V.

Molecular Weight of p-TFIIF RAP 74: 74 kDa.

Positive Controls: TFIIF RAP 74 (m): 293T Lysate: sc-124005 or NIH/3T3 whole cell lysate: sc-2210.

DATA



Western blot analysis of TFIIF RAP 74 phosphorylation in untreated non-transfected 293T: sc-117752 (**A,F**), untreated mouse TFIIF RAP 74 transfected 293T: sc-124005 (**B,G**), untreated NIH/3T3 (**C,H**), lambda protein phosphatase (sc-200312A) treated mouse TFIIF RAP 74 transfected 293T: sc-124005 (**D,I**) and lambda protein phosphatase (sc-200312A) treated NIH/3T3 (**E,J**) whole cell lysates. Antibodies tested include p-TFIIF RAP 74 (Ser 385/Thr 389)-R: sc-16793-R (**A,B,C,D,E**) and TFIIF RAP 74 (N-16): sc-234 (**F,G,H,I,J**).

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.