SANTA CRUZ BIOTECHNOLOGY, INC.

TFIIF RAP 74 (m): 293T Lysate: sc-124005

BACKGROUND

In eukaryotic systems, initiation of transcription from protein-coding genes is a complex process requiring RNA polymerase II (Pol 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 multi-protein complex near the transcription start site by interacting with core promotor 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 Pol II to assemble into a preinitiation complex formed by promotor DNA and the general factors TFIID, IIA and IIB. In addition, TFIIF stimulates transcription elongation by Pol 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. Nucleic Acids Res. 21: 273-279.

CHROMOSOMAL LOCATION

Genetic locus: Gtf2f1 (mouse) mapping to 17 E1.1.

PRODUCT

TFIIF RAP 74 (m): 293T Lysate represents a lysate of mouse TFIIF RAP 74 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

TFIIF RAP 74 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive TFIIF RAP 74 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.