SANTA CRUZ BIOTECHNOLOGY, INC.

Josephin-3 (C-3): sc-515159

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The Power to Question

BACKGROUND

Josephin-3 (TATA box-binding protein-associated factor RNA polymerase I subunit D) is a 278 amino acid transcription factor encoded by the human TAF1D gene. The TAF1D gene product is a major component of a TBP and TAF's (TATA box-binding protein-associated factors) complex known as SL1. This SL1 complex is important for the assembly of the preinitiation complex required for RNA polymerase I-dependent transcription. The SL1/TIF-IB complex has been shown to stabilize the nucleolar transcription factor 1/UBTF on rDNA. Impaired function of the SL1 complex leads to reduced levels of Pol I transcription. The TAF1D gene product has been shown to be involved in cell cycle progression and exhibits G_2/M phase specific phosphorylations. The TAF1D gene product is expressed in most tissues and is localized to the nucleus.

REFERENCES

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2. Geiduschek, E.P. and Kassavetis, G.A. 1995. Comparing transcriptional initiation by RNA polymerases I and III. Curr. Opin. Cell Biol. 7: 344-351.
3. Servant, N., et al. 2004. TBP-associated factor 1 overexpression induces tolerance to Doxorubicin in confluent H9c2 cells by an increase in Cdk2 activity and cyclin E expression. Mol. Cell. Biochem. 259: 71-81.
4. Friedrich, J.K., et al. 2005. TBP-TAF complex SL1 directs RNA polymerase I pre-initiation complex formation and stabilizes upstream binding factor at the rDNA promoter. J. Biol. Chem. 280: 29551-29558.
5. Gorski, J.J., et al. 2007. A novel TBP-associated factor of SL1 functions in RNA polymerase I transcription. EMBO J. 26: 1560-1568.
6. Kimura, J., et al. 2008. A functional genome-wide RNAi screen identifies TAF1 as a regulator for apoptosis in response to genotoxic stress. Nucleic Acids Res. 36: 5250-5259.
7. Pijnappel, W.P., et al. 2009. Quantitative mass spectrometry of TATA binding protein-containing complexes and subunit phosphorylations during the cell cycle. Proteome Sci. 7: 46.
8. Mayya, V., et al. 2009. Quantitative phosphoproteomic analysis of T cell receptor signaling reveals system-wide modulation of protein-protein interactions. Sci. Signal. 2: ra46.

CHROMOSOMAL LOCATION

Genetic locus: TAF1D (human) mapping to 11q21.

SOURCE

Josephin-3 (C-3) is a mouse monoclonal antibody raised against amino acids 203-278 mapping at the C-terminus of Josephin-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Josephin-3 (C-3) is recommended for detection of Josephin-3 of 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 Josephin-3 siRNA (h): sc-96913, Josephin-3 shRNA Plasmid (h): sc-96913-SH and Josephin-3 shRNA (h) Lentiviral Particles: sc-96913-V.

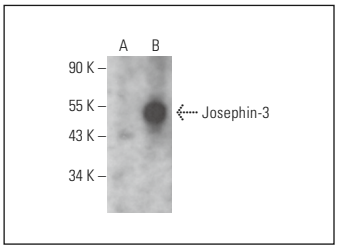
Molecular Weight of Josephin-3: 32 kDa.

Positive Control: Josephin-3 transfected HEK293T whole cell lysate.

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



Josephin-3 (C-3): sc-515159 Western blot analysis of Josephin-3 expression in non-transfected (**A**) and Josephin-3 transfected (**B**) HEK293T whole cell lysates.

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 for detailed protocols and support products.