SANTA CRUZ BIOTECHNOLOGY, INC.

JDP2 (3C1): sc-517133

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

c-Jun dimerization protein (JDP) 2 binds cAMP-response element (CRE) as a homodimer or as a heterodimer with ATF-2 and c-Jun. This dimerization allows JDP2 to repress CRE-dependent transcription. JDP2 is phosphorylated by c-Jun N-terminal kinase at Thr 138. JDP2 contains a basic leucine zipper (bZIP) region for DNA-binding. The bZIP region of JDP2 interacts with the DNA-binding domain (DBD) of progesterone receptor (PR) in mammalian cells. Two other coactivators, creb binding protein (CBP) and p300 CBP-associated factor (PCAF), also associate with JDP2. Thus, JDP2 appears to stimulate the N-terminal activation function domain of PR by docking to the DBD and facilitation PR interaction with other coactivators. The expression of JDP2 in PR-targeted tissues and cells supports the role for JDP2 in PR function. In addition, JDP2 may play an important role in controlling the commitment of F9 embryonal carcinoma cells to differentiation. In undifferentiated F9 cells, JDP2 recruits HDAC3 and binds the differentiation response element within the c-jun promoter. Retinoic acid-induction replaces the JDP2/HDAC3 complex with PCAF and subsequently allows the transcription of c-Jun for F9 differentiation. The gene encoding human JDP2 maps to chromosome 14q24.3.

REFERENCES

1. Jin, C., et al. 2001. Identification of mouse Jun dimerization protein 2 as a novel repressor of ATF-2. FEBS Lett. 489: 34-41.
2. Piu, F., et al. 2001. AP-1 repressor protein JDP-2: inhibition of UV-mediated apoptosis through p53 down-regulation. Mol. Cell. Biol. 21: 3012-3024.
3. Jin, C., et al. 2002. JDP2, a repressor of AP-1, recruits a histone deacetylase 3 complex to inhibit the retinoic acid-induced differentiation of F9 cells. Mol. Cell. Biol. 22: 4815-4826.
4. Wardell, S.E., et al. 2002. Jun dimerization protein 2 functions as a progesterone receptor N-terminal domain coactivator. Mol. Cell. Biol. 22: 5451-5466.
5. LocusLink Report (LocusID: 122953). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: JDP2 (human) mapping to 14q24.3; Jdp2 (mouse) mapping to 12 D2.

SOURCE

JDP2 (3C1) is a mouse monoclonal antibody raised against amino acids 1-163 representing full length JDP2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

JDP2 (3C1) is recommended for detection of JDP2 of mouse, rat 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

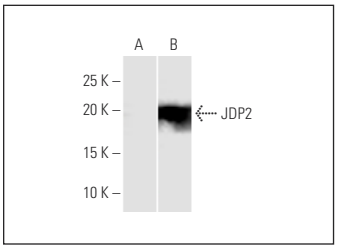
Suitable for use as control antibody for JDP2 siRNA (h): sc-38017, JDP2 siRNA (m): sc-38018, JDP2 shRNA Plasmid (h): sc-38017-SH, JDP2 shRNA Plasmid (m): sc-38018-SH, JDP2 shRNA (h) Lentiviral Particles: sc-38017-V and JDP2 shRNA (m) Lentiviral Particles: sc-38018-V.

Positive Controls: JDP2 transfected 293T whole cell lysate.

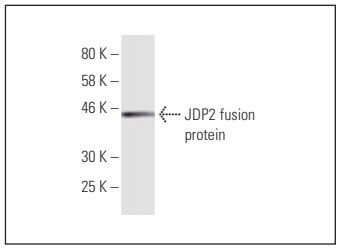
RECOMMENDED SUPPORT REAGENTS

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).

DATA



JDP2 (3C1): sc-517133. Western blot analysis of JDP2 expression in non-transfected (**A**) and JDP2 transfected (**B**) 293T whole cell lysates.



JDP2 (3C1): sc-517133. Western blot analysis of human recombinant JDP2 fusion protein.

SELECT PRODUCT CITATIONS

1. Li, S., et al. 2022. Transcription factor JDP2 activates PDE4B to participate in hypoxia/reoxygenation-induced H9c2 cell injury. Exp. Ther. Med. 23: 340.

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.