SANTA CRUZ BIOTECHNOLOGY, INC.

DJ-1 (N-20): sc-27004

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The DJ-1 gene encodes a highly-conserved protein which is implicated in a number of cell processes. DJ-1 was first identified as a novel oncogene that transformed mouse NIH/3T3 cells in cooperation with activated Ras. Additionally, DJ-1 was cloned in rat as SP22 or CAP-1 and found to be an infertility-related sperm protein, whose expression is reduced in sperm treated with toxicants. DJ-1 also positively regulates the androgen receptor (AR) by forming a complex with PIASxα, a negative regulator of AR. The gene encoding human DJ-1 maps to chromosome 1p36.23, a region identified as a hot spot of chromosome abnormalities in several tumor cells. Subsequently, mutations in the DJ-1 gene have been implicated in Parkinson's disease, and loss of DJ-1 function leads to neurodegeneration. DJ-1 is an ubiquitously expressed protein that is induced in response to growth stimuli and translocates from the cytoplasm to the nucleus during the S phase of the cell cycle.

CHROMOSOMAL LOCATION

Genetic locus: PARK7 (human) mapping to 1p36.23; Park7 (mouse) mapping to 4 E2.

SOURCE

DJ-1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DJ-1 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-27004 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

DJ-1 (N-20) is recommended for detection of DJ-1 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)], 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).

DJ-1 (N-20) is also recommended for detection of DJ-1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for DJ-1 siRNA (h): sc-37080, DJ-1 siRNA (m): sc-37081, DJ-1 shRNA Plasmid (h): sc-37080-SH, DJ-1 shRNA Plasmid (m): sc-37081-SH, DJ-1 shRNA (h) Lentiviral Particles: sc-37080-V and DJ-1 shRNA (m) Lentiviral Particles: sc-37081-V.

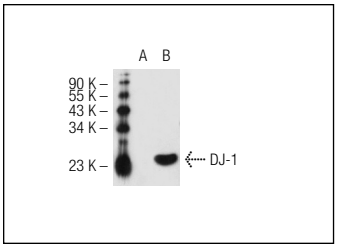
Molecular Weight of DJ-1: 23 kDa.

Positive Controls: rat testis extract: sc-2400, SK-N-SH cell lysate: sc-2410 or DJ-1 (m): 293T Lysate: sc-125250.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



DJ-1 (N-20): sc-27004. Western blot analysis of DJ-1 expression in non-transfected: sc-117752 (**A**) and mouse DJ-1 transfected: sc-125250 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Gonnet, F., et al. 2008. Proteome analysis of differentiating human myoblasts by dialysis-assisted two-dimensional gel electrophoresis (DAGE). Proteomics 8: 264-278.
2. Batelli, S., et al. 2008. DJ-1 modulates α-synuclein aggregation state in a cellular model of oxidative stress: relevance for Parkinson's disease and involvement of HSP 70. PLoS ONE 3: e1884.
3. Zhu, X.L., et al. 2010. DJ-1: a novel independent prognostic marker for survival in glottic squamous cell carcinoma. Cancer Sci. 101: 1320-1325.
4. Pérez-Pérez, R., et al. 2012. Uncovering suitable reference proteins for expression studies in human adipose tissue with relevance to obesity. PLoS ONE 7: e30326.
5. Sutinen, E.M., et al. 2014. Interleukin-18 alters protein expressions of neurodegenerative diseases-linked proteins in human SH-SY5Y neuron-like cells. Front. Cell. Neurosci. 8: 214.

RESEARCH USE

For research use only, not for use in diagnostic procedures.