

DJ-1 (C-16): sc-27006



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 PIASx α , 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 a 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 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of DJ-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27006 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

DJ-1 (C-16) 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 μ g per 100-500 μ g 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 (C-16) is also recommended for detection of DJ-1 in additional species, including equine, canine 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.

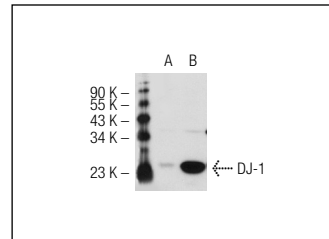
Molecular Weight of DJ-1: 23 kDa.

Positive Controls: DJ-1 (m): 293T Lysate: sc-125250, HeLa whole cell lysate: sc-2200 or mouse brain extract: sc-2253.

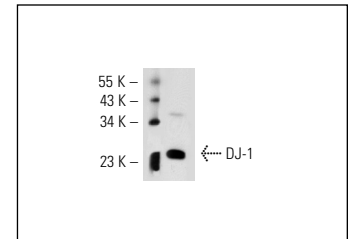
STORAGE

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

DATA



DJ-1 (C-16): sc-27006. 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.



DJ-1 (C-16): sc-27006. Western blot analysis of DJ-1 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

- Karunakaran, S., et al. 2007. Activation of apoptosis signal regulating kinase 1 (ASK 1) and translocation of death-associated protein, Daxx, in substantia nigra pars compacta in a mouse model of Parkinson's disease: protection by α -lipoic acid. *FASEB J.* 21: 2226-2236.
- Benoit, A.M., et al. 2007. Expression of sperm protein 22 (SP22) in the rat ovary during different reproductive states. *Exp. Biol. Med.* 232: 910-920.
- van der Brug, M.P., et al. 2008. RNA binding activity of the recessive parkinsonism protein DJ-1 supports involvement in multiple cellular pathways. *Proc. Natl. Acad. Sci. USA* 105: 10244-10249.
- Xie, Z., et al. 2009. DJ-1 mRNA anatomical localization and cell type identification in the mouse brain. *Neurosci. Lett.* 465: 214-219.
- Repici, M., et al. 2013. Parkinson's disease-associated mutations in DJ-1 modulate its dimerization in living cells. *J. Mol. Med.* 91: 599-611.
- Tanti, G.K. and Goswami, S.K. 2014. SG2NA recruits DJ-1 and Akt into the mitochondria and membrane to protect cells from oxidative damage. *Free Radic. Biol. Med.* 75: 1-13.

PROTOCOLS

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

MONOS
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Try **DJ-1 (D-4): sc-55572** or **DJ-1 (A-9): sc-55573**, our highly recommended monoclonal alternatives to DJ-1 (C-16). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **DJ-1 (D-4): sc-55572**.