

# DJ-1 (FL-189): sc-32874

## 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 PIAS $\alpha$ , 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 (FL-189) is a rabbit polyclonal antibody raised against amino acids 1-189 representing full length DJ-1 of human origin.

## PRODUCT

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

## APPLICATIONS

DJ-1 (FL-189) 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 (FL-189) 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: HeLa whole cell lysate: sc-2200, SK-N-SH cell lysate: sc-2410 or BT-20 cell lysate: sc-2223.

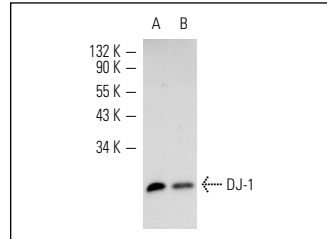
## STORAGE

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

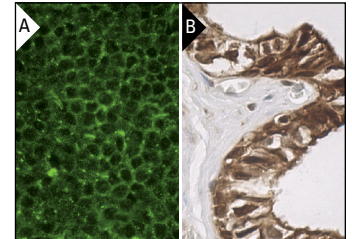
## RESEARCH USE

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

## DATA



DJ-1 (FL-189): sc-32874. Western blot analysis of DJ-1 expression in BT-20 (A) and HeLa (B) whole cell lysates.



DJ-1 (FL-189): sc-32874. Immunofluorescence staining of normal mouse lymph node frozen section showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts (B).

## SELECT PRODUCT CITATIONS

- Clements, C.M., et al. 2006. DJ-1, a cancer- and Parkinson's disease-associated protein, stabilizes the antioxidant transcriptional master regulator Nrf2. *Proc. Natl. Acad. Sci. USA* 103: 15091-15096.
- Chelhi, I., et al. 2009. Molecular profiles of Quadriceps muscle in myostatin-null mice reveal PI3K and apoptotic pathways as myostatin targets. *BMC Genomics* 10: 196.
- Taga, H., et al. 2011. Cellular and molecular large-scale features of fetal adipose tissue: is bovine perirenal adipose tissue brown? *J. Cell. Physiol.* 227: 1688-1700.
- Guillemin, N., et al. 2011. Functional analysis of beef tenderness. *J. Proteomics* 75: 352-365.
- Chelhi, I., et al. 2011. Myostatin inactivation induces a similar muscle molecular signature in double-muscling cattle as in mice. *Animal* 5: 278-286.
- Haniu, H., et al. 2011. DJ-1 as a potential biomarker for the development of biocompatible multiwalled carbon nanotubes. *Int. J. Nanomedicine* 6: 2689-2695.
- Guillemin, N., et al. 2011. Variations in the abundance of 24 protein biomarkers of beef tenderness according to muscle and animal type. *Animal* 5: 885-894.
- Park, S.R., et al. 2012. Preferential cytotoxic effect of genistein on G361 melanoma cells via inhibition of the expression of focal adhesion kinase. *Int. J. Oral Biol.* 37: 189-195.


 MONOS  
Satisfaction  
Guaranteed

Try **DJ-1 (D-4): sc-55572** or **DJ-1 (A-9): sc-55573**, our highly recommended monoclonal alternatives to DJ-1 (FL-189). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **DJ-1 (D-4): sc-55572**.