

DJ-1 (m): 293T Lysate: sc-125250

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 trans-locates from the cytoplasm to the nucleus during the S phase of the cell cycle.

REFERENCES

1. Nagakubo, D., et al. 1997. DJ-1, a novel oncogene which transforms mouse NIH/3T3 cells in cooperation with Ras. *Biochem. Biophys. Res. Commun.* 231: 509-513.
2. Taira, T., et al. 2001. Molecular cloning of human and mouse DJ-1 genes and identification of Sp1-dependent activation of the human DJ-1 promoter. *Gene* 263: 285-292.
3. Takahashi, K., et al. 2001. DJ-1 positively regulates the androgen receptor by impairing the binding of PIASx α to the receptor. *J. Biol. Chem.* 276: 37556-37563.
4. Bonifati, V., et al. 2003. Mutations in the DJ-1 gene associated with autosomal recessive early-onset Parkinsonism. *Science* 299: 256-259.
5. Niki, T., et al. 2003. DJBP: A novel DJ-1-binding protein, negatively regulates the androgen receptor by recruiting histone deacetylase complex, and DJ-1 antagonizes this inhibition by abrogation of this complex. *Mol. Cancer Res.* 1: 247-261.
6. Cookson, M.R. 2003. Pathways to Parkinsonism. *Neuron* 37: 7-10.

CHROMOSOMAL LOCATION

Genetic locus: Park7 (mouse) mapping to 4 E2.

PRODUCT

DJ-1 (m): 293T Lysate represents a lysate of mouse DJ-1 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

DJ-1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive DJ-1 antibodies. Recommended use: 10-20 μ l per lane.

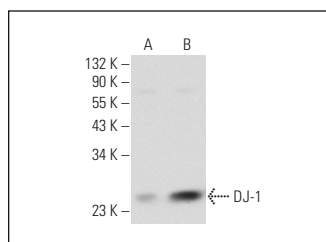
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

DJ-1 (D-4): sc-55572 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse DJ-1 expression in DJ-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



DJ-1 (D-4): sc-55572. 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.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.