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Store at -20C
#2134

DJ-1 Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 22	Source/Isotype: Rabbit	UniProt ID: #Q99497	Entrez-Gene Id: 11315
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Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

DJ-1 Antibody detects endogenous levels of total DJ-1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding amino acid 150 of human DJ-1. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Parkinson's disease (PD) is characterized by the presence of Lewy bodies (intracellular inclusions) and by the loss of dopaminergic neurons. Research studies have shown that mutations in α -synuclein, Parkin, and DJ-1 are linked to PD (1). α -synuclein is a major component of the aggregates found in Lewy bodies. Parkin is involved in protein degradation through the ubiquitin-proteasome pathway, and investigators have shown that mutations in Parkin cause early onset of PD (1). Loss-of-function mutations in DJ-1 cause early onset of PD, but DJ-1 is associated with multiple functions: it cooperates with Ras to increase cell transformation, it positively regulates transcription of the androgen receptor, and it may function as an indicator of oxidative stress (2-5). Dopamine D2 receptor-mediated functions are greatly impaired in DJ-1 (-/-) mice, resulting in reduced long-term depression (6).

Background References

1. Borrelli, E. (2005) *Neuron* 45, 479-81.
2. Bonifati, V. et al. (2003) *Science* 299, 256-9.
3. Nagakubo, D. et al. (1997) *Biochem. Biophys. Res. Commun.* 231, 509-13.
4. Takahashi, K. et al. (2001) *J. Biol. Chem.* 276, 37556-63.
5. Mitsumoto, A. and Nakagawa, Y. (2001) *Free Radic. Res.* 35, 885-93.
6. Goldberg, M.S. et al. (2005) *Neuron* 45, 489-96.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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