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#5560

## DJ-1 (D21E11) Rabbit mAb

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

<b>Applications:</b> W, IP	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 22	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #Q99497	<b>Entrez-Gene Id:</b> 11315
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### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation

#### Dilution

1:1000  
1:50

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

### Specificity/Sensitivity

DJ-1 (D21E11) Rabbit mAb detects endogenous levels of total DJ-1 protein. DJ-1 (D21E11) Rabbit mAb is recommended to detect human samples but may also detect mouse and rat samples weakly.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly150 of human DJ-1 protein.

### 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  $\alpha$ -synuclein, Parkin, and DJ-1 are linked to PD (1).  $\alpha$ -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

- Borrelli, E. (2005) *Neuron* 45, 479-81.
- Bonifati, V. et al. (2003) *Science* 299, 256-9.
- Nagakubo, D. et al. (1997) *Biochem. Biophys. Res. Commun.* 231, 509-13.
- Takahashi, K. et al. (2001) *J. Biol. Chem.* 276, 37556-63.
- Mitsumoto, A. and Nakagawa, Y. (2001) *Free Radic. Res.* 35, 885-93.
- 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 BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

### Applications Key

**W:** Western Blotting **IP:** Immunoprecipitation

### Cross-Reactivity Key

**H:** Human

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