

Store at -20C  
#5933

## DJ-1 (D29E5) XP® Rabbit mAb



**Cell Signaling**  
TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, W-S, IP, IF-IC	H M R Hm Mk	Endogenous	22	Rabbit IgG	#Q99497	11315

### Product Usage Information

#### Application

Western Blotting  
Simple Western™  
Immunoprecipitation  
Immunofluorescence (Immunocytochemistry)

#### Dilution

1:1000  
1:50 - 1:250  
1:100  
1:100

### 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 (D29E5) XP® Rabbit mAb recognizes endogenous levels of total DJ-1 protein.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys148 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

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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**WB:** Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation  
**IF-IC:** Immunofluorescence (Immunocytochemistry)

### Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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