Revision 1

Store at -20C

#88652

DJ-1 (D29E5) XP® Rabbit mAb (HRP Conjugate)

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:
W	H M R Hm Mk	Endogenous	22	Rabbit IgG	#Q99497	11315

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

DJ-1 (D29E5) XP® Rabbit mAb (HRP Conjugate) 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.

Description

This Cell Signaling Technology antibody is conjugated to the carbohydrate groups of horseradish peroxidase (HRP) via its amine groups. The HRP conjugated antibody is expected to exhibit the same species cross-reactivity as the unconjugated DJ-1 (D29E5) XP® Rabbit mAb #5933.

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 BSA, 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 **Hm:** Hamster **Mk:** Monkey

Trademarks and Patents

Limited Uses

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