

Store at  
-20C  
#23706**Phospho- $\alpha$ -Synuclein (Ser129) (D1R1R)  
Rabbit mAb****Orders:** 877-616-CELL (2355)  
orders@cellsignal.com**Support:** 877-678-TECH (8324)**Web:** info@cellsignal.com  
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3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IF-F	H M R	Endogenous	18	Rabbit IgG	#P37840	6622

**Product Usage Information****Application**Western Blotting  
Immunoprecipitation  
Immunofluorescence (Frozen)**Dilution**1:1000  
1:50  
1:400 - 1:1600**Storage**Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier-free (BSA and azide free) version of this product see product #87281.

**Specificity/Sensitivity**Phospho- $\alpha$ -Synuclein (Ser129) (D1R1R) Rabbit mAb recognizes endogenous levels of  $\alpha$ -Synuclein protein only when phosphorylated at Ser129. Specificity of nuclear staining is unclear but consistent with previous publications (4).**Source / Purification**Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser129 of human  $\alpha$ -Synuclein protein.**Background** $\alpha$ -Synuclein is a protein of 140-amino acids expressed abundantly in the brain.  $\alpha$ -Synuclein is also the main component of pathogenic Lewy bodies and Lewy neurites. Research studies have shown that mutations of the  $\alpha$ -Synuclein gene are linked to Parkinson's disease (1).Various research studies have shown that phosphorylation of  $\alpha$ -Synuclein at Ser129 is a highly toxic event causing degeneration of dopaminergic neurons associated with Parkinson's disease. This is proposed to occur through increased misfolding, aggregation, and accumulation of  $\alpha$ -Synuclein phosphorylated at this site (2). GSK-3 $\beta$  is one of several kinases that has been reported to phosphorylate  $\alpha$ -Synuclein at Ser129 (3).**Background References**

1. Goldberg, M.S. and Lansbury Jr., P.T. (2000) *Nat. Cell Biol.* 2, 115-119.
2. Oueslati, A. et al. (2010) *Prog Brain Res* 183, 115-45.
3. Credle, J.J. et al. (2015) *Cell Death Differ* 22, 838-51.
4. Yu, S. et al. (2007) *Neuroscience* 145, 539-55.

**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 **IF-F:** Immunofluorescence (Frozen)**Cross-Reactivity Key****H:** Human **M:** Mouse **R:** Rat**Trademarks and Patents**

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