Store at -20°C

#29087

PhosphoPlus® α-Synuclein (Ser129) Antibody Duet

Cell Signaling TECHNOLOGY®

Support: +1-978-867-2388 (U.S.)
www.cellsignal.com/support

Orders: 877-616-2355 (U.S.)
orders@cellsignal.com

Entrez-Gene ID #20617, 6622
UniProt ID #O55042, P37840

New 04/18

For Research Use Only. Not For Use In Diagnostic Procedures.

Products Included	Product #	Quantity	Mol. Wt.	Isotype
Phospho-α-Synuclein (Ser129) (D1R1R) Rabbit mAb	23706	100 µl	18 kDa	Rabbit IgG
α-Synuclein (D37A6) XP® Rabbit mAb	4179	100 µl	18 kDa	Rabbit IgG

See www.cellsignal.com for individual component applications, species cross-reactivity, dilutions and additional application protocols.

Description: PhosphoPlus® Duets from Cell Signaling Technology (CST) provide a means to assess protein activation status. Each Duet contains an activation-state and total protein antibody to your target of interest. These antibodies have been selected from CST's product offering based upon superior performance in specified applications.

Background: α-Synuclein is a protein of 140-amino acids expressed abundantly in the brain. α-Synuclein is also the main component of pathogenic Lewy bodies and Lewy neurites. Research studies have shown that mutations of the α-synuclein gene are linked to Parkinson's disease (1). Various research studies have shown that phosphorylation of α-Synuclein at Ser129 is a highly toxic event that causes degeneration of dopaminergic neurons, which are associated with Parkinson's disease. This is proposed to occur through increased misfolding, aggregation, and accumulation of α-Synuclein phosphorylated at this site (2). GSK-3β is one of several kinases that has been reported to phosphorylate α-Synuclein at Ser129 (3).

Specificity/Sensitivity: α-Synuclein (D37A6) XP® Rabbit mAb detects endogenous levels of the α isoform of synuclein. Phospho-α-Synuclein (Ser129) (D1R1R) Rabbit mAb recognizes endogenous levels of α-Synuclein protein only when phosphorylated at Ser129. Specificity of nuclear staining is unclear but consistent with previous publications (4).

Source/Purification: Monoclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu105 of mouse α-synuclein protein or a synthetic phosphopeptide corresponding to residues surrounding Ser129 of human α-Synuclein protein.

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.*

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

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.

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www.cellsignal.com

Applications: W—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity: H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **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 **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.