



PhosphoSolutions®
Antibodies that work™

Colorado Biosciences Park
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Anti-Phospho-Ser¹²⁹ Alpha Synuclein

Catalog Number: p1571-129

Size: 100 µl

Product Description: Affinity purified rabbit polyclonal antibody

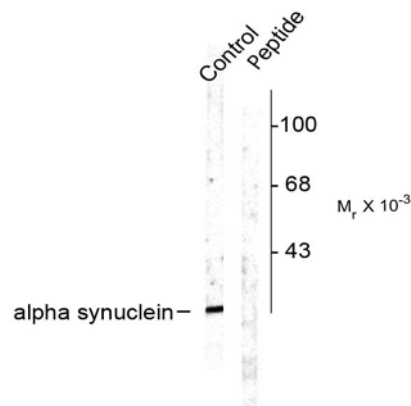
Applications: WB: 1:1000

Antigen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser¹²⁹ of alpha synuclein.

Species reactivity: The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will react with bovine, canine, human, mouse, and non-human primate based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

Biological Significance: Alpha-synuclein is a presynaptic neuronal protein that is thought to be involved in the formation of SNARE complexes. Most significantly, aggregated alpha-synuclein is one of the major components found in the Lewy bodies that occur in Parkinson's disease (PD) and other neurodegenerative disorders (Okochi et al., 2000). Mutation of the alpha-synuclein gene is associated with familial forms of PD (Newmann et al., 2002). Recent evidence suggests that phosphorylation of alpha-synuclein at ser¹²⁹ plays a role in the formation of inclusions in PD (Smith et al., 2005; Masliah et al., 2005).

Anti-Phospho-Ser¹²⁹ Alpha Synuclein



Western blot of rat cortex lysate showing specific labeling of the ~15 k alpha synuclein protein phosphorylated at Ser¹²⁹. Immunolabeling is blocked by the phosphopeptide (peptide) used as antigen but not by the corresponding dephosphopeptide (not shown).

WB = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation

Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.

Storage and Stability: Store at -20°C; stable for at least one year.

Shipment: Domestic - Blue Ice; International - Blue Ice or Dry Ice.

Purification Method: Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Antibody Specificity: Specific for the ~15 kDa alpha-synuclein protein phosphorylated at Ser¹²⁹. Immunolabeling is blocked by the phosphopeptide used as antigen but not by the corresponding dephosphopeptide.

Quality Control Tests: Western blots performed on each lot.

References:

Okochi M, Walter J, Koyama A, Nakajo S, Baba M, Iwatsubo T, Meijer L, Kahle PJ, Haass C (2000) Constitutive phosphorylation of the Parkinson's disease associated alpha-synuclein. *J Biol Chem* Jan 7;275(1): 390-7.

Neumann M, Kahle PJ, Giasson BI, Ozmen L, Borroni E, Sporeen W, Muller V, Odoy S, Fujiwara H, Hasegawa M, Iwatsubo T, Trojanowski JQ, Kretschmar HA, Haass C (2002) Misfolded proteinase k resistant hyperphosphorylated alpha-synuclein in aged transgenic mice with locomotor deterioration and in human alpha synucleinopathies. *J Clin Invest* Nov; 110(10):1403-5.

Smith WW, Margolis RL, Li X, Troncoso JC, Lee MK, Dawson VL, Dawson TM, Iwatsubo T, Ross CA (2005) Alpha-synuclein phosphorylation enhances eosinophilic cytoplasmic inclusion formation in SH-SY5Y Cells. *J Neurosci* June 8; 25(23):5544-5552.

Masliah E, Rockenstein E, Adame A, Alford M, Crews L, Hashimoto M, Suebert P, Lee M, Goldstein J, Chilcote T, Games D, Schenk D (2005) Effects of alpha-synuclein immunization in a mouse model of Parkinson's disease. *Neuron* Jun 16;46(6):857-868.

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