

# Anti-Phospho-Ser<sup>129</sup> Alpha Synuclein Antibody



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**Catalog #:** p1571-129

**Size:** 100 µl

**Cite this Antibody:** PhosphoSolutions Cat# p1571-129, RRID:AB\_2492038

| Host   | Applications           | Species Tested | Species Reactivity* | Molecular Weight |
|--------|------------------------|----------------|---------------------|------------------|
| Rabbit | WB 1:1000<br>IHC 1:200 | H, M, R        | B, C, NHP           | ~15 kDa          |

**Product Description:** Affinity purified rabbit polyclonal antibody.

**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 ser<sup>129</sup> plays a role in the formation of inclusions in PD (Smith et al., 2005; Masliah et al., 2005).

**Antigen:** Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser<sup>129</sup> of rat alpha synuclein.

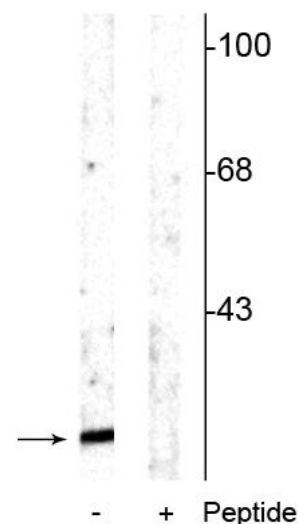
**Antibody Specificity:** Specific for endogenous levels of the ~15 kDa alpha-synuclein protein phosphorylated at Ser<sup>129</sup>. Immunolabeling is blocked by preadsorption with the phosphopeptide used as antigen, but not by the corresponding non-phosphopeptide.

**Purification Method:** Prepared from pooled rabbit serum by affinity purification via sequential chromatography on phospho and non-phosphopeptide affinity columns.

**Quality Control Tests:** Western blots performed on each lot.

**Packaging:** 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol.

**Storage and Stability:** Shipped on blue ice. Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.



Western blot of rat cortical lysate showing specific immunolabeling of the ~15 kDa alpha synuclein protein phosphorylated at Ser<sup>129</sup> in the first lane (-). Phosphospecificity is shown in the second lane (+) where the immunolabeling is blocked by the phosphopeptide used as antigen but not by the corresponding non-phosphopeptide (not shown).

## Product Specific References:

Creed, R.B. and Goldberg, M.S., 2020. Enhanced susceptibility of PINK1 knockout rats to  $\alpha$ -synuclein fibrils. *Neuroscience*, 437, 64-75.

Corwin, C., Nikolopoulou, A., Pan, A.L., Nunez-Santos, M., Vallabhajosula, S., Serrano, P., Babich, J. and Figueiredo-Pereira, M.E., 2018. Prostaglandin D2/J2 signaling pathway in a rat model of neuroinflammation displaying progressive parkinsonian-like pathology: potential novel therapeutic targets. *Journal of neuroinflammation*, 15(1), p.272.

## General 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, Spooen W, Muller V, Odooy 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.