

Product datasheet

Phosphotyrosine Alpha-synuclein Quantitative ELISA Kit ab279935

1 Image

Overview

<b>Product name</b>	Phosphotyrosine Alpha-synuclein Quantitative ELISA Kit
<b>Detection method</b>	Colorimetric
<b>Sample type</b>	Cell Lysate
<b>Assay type</b>	Quantitative
<b>Assay duration</b>	Multiple steps standard assay
<b>Species reactivity</b>	<b>Reacts with:</b> Human

**Product overview** Phosphotyrosine Alpha-synuclein Quantitative (ab279935) is a very rapid, convenient and sensitive assay kit that can monitor the activation or function of important biological pathways in human cell lysates. By determining phosphorylated Alpha-synuclein protein in your experimental model system, you can verify pathway activation in your cell lysates. You can simultaneously measure numerous different cell lysates without spending excess time and effort in performing a Western Blotting analysis.

This Sandwich ELISA kit is an *in vitro* enzyme-linked immunosorbent assay for the **quantitative** measurement of human phospho-Alpha-synuclein. An anti-pan Alpha-synuclein antibody has been coated onto a 96-well plate. Standard and Samples are pipetted into the wells and Alpha-synuclein present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated anti-phosphotyrosine antibody is used to detect only tyrosine-phosphorylated protein. After washing away unbound antibody, HRP-conjugated streptavidin is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of phospho-Alpha-synuclein bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm.

**Notes** Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances. It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

**Platform** Pre-coated microplate (12 x 8 well strips)

Properties

**Storage instructions**

Store at -20°C. Please refer to protocols.

Components	1 x 96 tests
20X Wash Buffer	1 x 25ml
2X Cell lysate buffer	1 x 10ml
5X Assay Diluent	1 x 15ml
600X HRP-Streptavidin Concentrate	1 vial
Biotinylated anti-phosphotyrosine antibody	2 vials
Pan-Alpha-synuclein Coated Microplate	1 unit
Phospho Standard Alpha-synuclein Protein	1 vial
Stop Solution	1 x 8ml
TMB One-Step Substrate Reagent	1 x 12ml

**Function**

May be involved in the regulation of dopamine release and transport. Induces fibrillization of microtubule-associated protein tau. Reduces neuronal responsiveness to various apoptotic stimuli, leading to a decreased caspase-3 activation.

**Tissue specificity**

Expressed principally in brain but is also expressed in low concentrations in all tissues examined except in liver. Concentrated in presynaptic nerve terminals.

**Involvement in disease**

Genetic alterations of SNCA resulting in aberrant polymerization into fibrils, are associated with several neurodegenerative diseases (synucleinopathies). SNCA fibrillar aggregates represent the major non A-beta component of Alzheimer disease amyloid plaque, and a major component of Lewy body inclusions. They are also found within Lewy body (LB)-like intraneuronal inclusions, glial inclusions and axonal spheroids in neurodegeneration with brain iron accumulation type 1. Parkinson disease 1  
Parkinson disease 4  
Dementia Lewy body

**Sequence similarities**

Belongs to the synuclein family.

**Domain**

The 'non A-beta component of Alzheimer disease amyloid plaque' domain (NAC domain) is involved in fibrils formation. The middle hydrophobic region forms the core of the filaments. The C-terminus may regulate aggregation and determine the diameter of the filaments.

**Post-translational modifications**

Phosphorylated, predominantly on serine residues. Phosphorylation by CK1 appears to occur on residues distinct from the residue phosphorylated by other kinases. Phosphorylation of Ser-129 is selective and extensive in synucleinopathy lesions. In vitro, phosphorylation at Ser-129 promoted insoluble fibril formation. Phosphorylated on Tyr-125 by a PTK2B-dependent pathway upon osmotic stress.

Hallmark lesions of neurodegenerative synucleinopathies contain alpha-synuclein that is modified by nitration of tyrosine residues and possibly by dityrosine cross-linking to generated stable oligomers.

Ubiquitinated. The predominant conjugate is the diubiquitinated form.

Acetylation at Met-1 seems to be important for proper folding and native oligomeric structure.

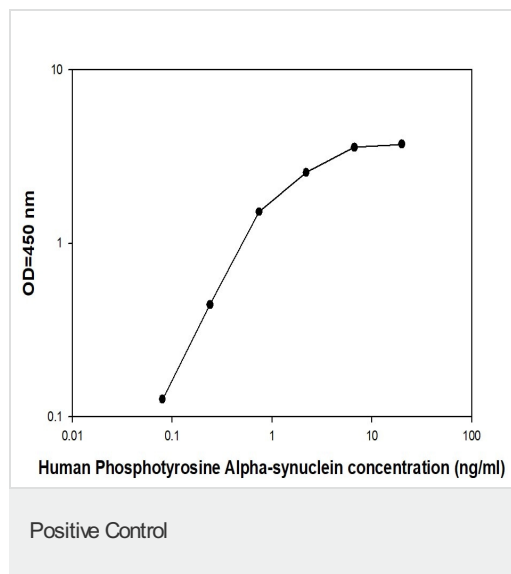
**Cellular localization**

Cytoplasm, cytosol. Membrane. Nucleus. Cell junction, synapse. Secreted. Membrane-bound in dopaminergic neurons.

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## Images

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These standard curves are for demonstration only. A standard curve must be run with each assay.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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