

## Alpha-Synuclein Rapid ELISA Kit: Human (1 Plate)

**Catalogue No.:** BEK-2216-1P

**Description:** The Biosensis Alpha-Synuclein Rapid™ enzyme-linked immunosorbent assay (ELISA) Kit is a sandwich ELISA that allows the quantification of human alpha-synuclein in less than 4 hours in human citrate-plasma, serum and CSF only if used as directed. Please refer to the kit protocol for specific use instructions for blood and CSF application.

This ELISA kit consists of a pre-coated sheep polyclonal anti-alpha-synuclein (aa: 116-131) capture antibody, a biotinylated mouse monoclonal anti-alpha-synuclein detection antibody (aa: 61-95) and horseradish peroxidase (HRP)-conjugated streptavidin. The addition of a substrate (3,3',5,5'-tetramethylbenzidine, TMB) yields a colored reaction product which is directly proportional to the concentration of alpha-synuclein present in samples and protein standards. A human alpha-synuclein positive control (QC sample) is provided to assure consistent assay performance.

This ELISA kit has not been tested for other applications. It has been configured for research use only and is not to be used for diagnostic or clinical procedures.

**Batch No.:** Refer to the product label.

**Antigen:** Alpha synuclein is an abundant 140 amino acid neuronal protein, expressed primarily at presynaptic terminals in the central nervous system. Alpha synuclein has been associated with several neurodegenerative diseases. A point mutation in the gene coding for the alpha-synuclein protein was the first discovery linking this protein to a rare familial form of Parkinson's disease (PD). Subsequently, other mutations in the alpha-synuclein gene have been identified in familial PD. The aggregated proteinaceous inclusions called Lewy bodies found in PD and cortical Lewy body dementia (LBD) were discovered to be predominantly alpha-synuclein. Aberrant aggregation of alpha-synuclein has been detected in an increasing number of neurodegenerative diseases, collectively known as synucleopathies. Alpha-synuclein exists physiologically in both soluble and membrane-bound states, in unstructured and alpha-helical conformations, respectively. The physiological function of alpha-synuclein appears to require its translocation between these subcellular compartments and interconversion between the 2 conformations. Abnormal processing of alpha-synuclein is predicted to lead to pathological changes in its binding properties and function.

**Other Names:** Non-A beta component of AD amyloid; Non-A4 component of amyloid precursor; NACP

**Accession:** P37840 SYUA\_HUMAN

**Produced in:** The standard for this kit is recombinant alpha-synuclein protein produced in and purified from E.coli.

**Applications:** ELISA. The purpose of this kit is the in-vitro quantitative determination of human alpha-synuclein in samples such as citrate-plasma, serum and CSF.

**Specificity:** Human alpha-synuclein. Detection of individual alpha-synuclein isoforms has not yet been investigated. However, due to the nature of the assay antibodies, this ELISA kit is not expected to discriminate between various alpha-synuclein isoforms.

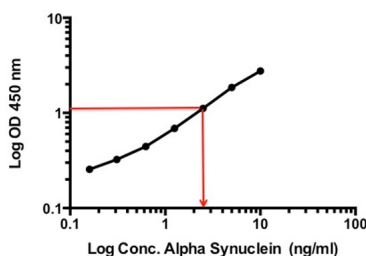
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FOR RESEARCH USE ONLY

## Alpha-Synuclein Rapid ELISA Kit: Human (1 Plate)

Cross-reactivity of beta- and gamma-synuclein, spiked in excess into 2 plasma samples. was calculated based on increase or decrease of apparent endogenous  $\alpha$ -synuclein concentrations. This ELISA shows very little cross-reactivity of 2.3% or less for beta- and gamma-synuclein.

- Cross-reactivity:** While not directly tested in the ELISA, mouse and rat alpha-synuclein are expected to cross-react due to species cross-reactivity of both capture and detection antibody.
- Storage:** Store at 2-8C.
- Expiry Date:** 12 months from purchase.
- Kit components:** The ELISA kit box contains 1 x 96-well pre-coated strip plate, protein standards, QC sample, detection reagents, wash and sample buffers, substrate buffer and detailed protocols.
- Range:** 0.16 - 10 ng/mL
- Sensitivity:** Typical limit of detection (LOD) for alpha-synuclein is < 100 pg/mL, determined as alpha-synuclein concentration at blank OD plus 3x standard deviation of blank OD (n=10).
- Kit protocol:** Please refer to our online product listing for current protocol/MSDS versions.
- MSDS:** Please refer to our online product listing for current protocol/MSDS versions.



This standard curve generated in our laboratories is for demonstration purposes only, but can be used as a guide to expected performance. A standard curve should be generated for each assay.

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