

α/β Synuclein

Cat.No. 128 003; Polyclonal rabbit antibody, 50 μ g specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 μ g specific antibody, lyophilized. Affinity purified with the immunogen. Rabbit serum albumin was added for stabilization. For reconstitution add 50 μ l H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 (AP staining) IP: yes ICC: 1 : 500 IHC: 1 : 500 IHC-P/FFPE: 1 : 200 ELISA: yes (see remarks)
Immunogen	Synthetic peptide corresponding to AA 2 to 25 from human α -Synuclein (UniProt Id: P37840)
Reactivity	Reacts with: rat (P37377, Q63754), mouse (O55042, Q91ZZ3), zebrafish, human (P37840, Q16143). Other species not tested yet.
Specificity	Recognizes α synuclein and β synuclein.
Remarks	ELISA: This antibody is suitable as detector antibody for sandwich-ELISA with cat. no. 128 011 or 128 211 as capture antibodies (protocol for sandwich-ELISA).

TO BE USED IN VITRO / FOR RESEARCH ONLY NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Synuclein proteins are produced by three genes. They share structural resemblance to apolipoproteins, but are abundant in the neuronal cytosol and present in enriched amounts at presynaptic terminals.

Synucleins have been specifically implicated in three diseases: Alzheimer's (AD), Parkinson's (PD) and breast cancer. In AD, a peptide derived from α -synuclein forms an intrinsic component of plaque amyloid. In PD, an α -synuclein allele is genetically linked to several independent familial cases, and the protein appears to accumulate in Lewy bodies. In breast cancer, increased expression of γ -synuclein correlates with disease progression.

In songbirds, α -synuclein expression is correlated with plasticity in the developing song control system. Although the normal function of synucleins is unknown, a role in synaptic plasticity seems likely.

Selected General References

- Genetics of Parkinson's disease.
Polymeropoulos MH
Annals of the New York Academy of Sciences (2000) 920: 28-32.
- Depression in alpha-synucleinopathies: prevalence, pathophysiology and treatment.
Stefanova N, Seppi K, Scherfler C, Puschban Z, Wenning GK
Journal of neural transmission. Supplementum (2000) (60): 335-43.
- The synucleins: a family of proteins involved in synaptic function, plasticity, neurodegeneration and disease.
Clayton DF, George JM
Trends in neurosciences (1998) 21(6): 249-54.
- Filamentous nerve cell inclusions in neurodegenerative diseases.
Goedert M, Spillantini MG, Davies SW
Current opinion in neurobiology (1998) 8(5): 619-32.
- Genetic classification of primary neurodegenerative disease.
Hardy J, Gwinn-Hardy K
Science (New York, N.Y.) (1998) 282(5391): 1075-9.
- The synuclein family.
Lavedan C
Genome research (1998) 8(9): 871-80.
- New developments in understanding the etiology of Parkinson's disease and in its treatment.
Lozano AM, Lang AE, Hutchison WD, Dostrovsky JO
Current opinion in neurobiology (1998) 8(6): 783-90.