

## Product datasheet for **TA336706**

### alpha Synuclein (SNCA) Mouse Monoclonal Antibody [Clone ID: 2A7]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	2A7
Applications:	IF, WB
Recommended Dilution:	WB: 1:1000, IF: 1:1000
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Human alpha-Synuclein [UniProt# P37840]
Formulation:	Preservative: 0.05% Sodium Azide. Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Ascites
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	14.5 kDa
Gene Name:	synuclein alpha
Database Link:	<a href="#">NP_000336</a> <a href="#">Entrez Gene 20617 Mouse</a> <a href="#">Entrez Gene 29219 Rat</a> <a href="#">Entrez Gene 6622 Human</a> <a href="#">P37840</a>



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**Background:**

alpha-Synuclein (SNCA, NACP or PARK-1) is a neuronal protein normally localized to presynaptic terminals and has been involved in processes such as dopamine biosynthesis, synaptic plasticity, and vesicle dynamics. SNCA-VAMP2 direct binding promotes SNARE complex assembly through a nonclassical chaperone activity and regulation of SNARE complex's assembly/disassembly is essential for efficient neurotransmission. CSP-alpha, a presynaptic protein also promotes SNARE complex assembly via formation of chaperone complex with heat shock cognate 70 (Hsc70) and small glutamine-rich protein SGT (CSP-alpha-Hsc70-SGT complex). Interestingly, the CSP-alpha-knockout mice depicted rapidly progressive neurodegeneration followed by premature death which was counteracted by transgenic expression of SNCA. Overexpressed SNCA indirectly inhibited SNARE-mediated exocytosis by sequestering arachidonic acid, which upregulates syntaxin and enhances its engagement with SNARE complex. Tight regulation of subcellular level and distribution of SNCA is indispensable for the intrinsic functions of neuronal cells and genetic alterations of SNCA resulting in aberrant polymerization into fibrils are associated with several neurodegenerative diseases (synucleinopathies) including Parkinson disease type -1 (PARK1) - 4 (PARK4) as well as dementia Lewy body (DLB).

**Synonyms:**

NACP; PARK1; PARK4; PD1

**Note:**

This alpha-Synuclein antibody is useful for Immunocytochemistry/Immunofluorescence and Western Blot.

**Protein Families:**

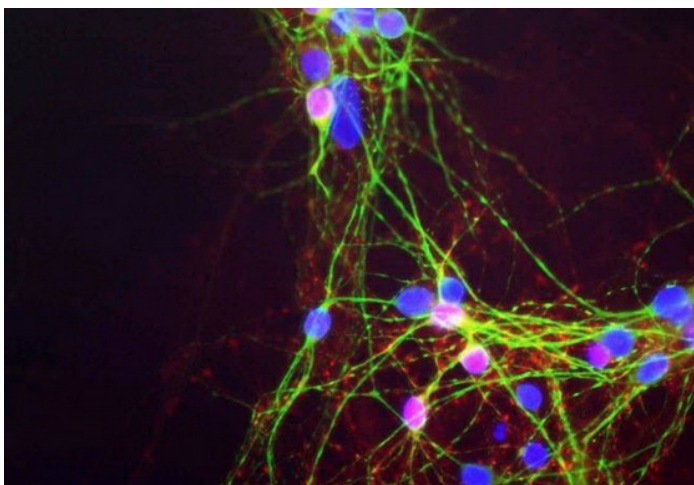
Druggable Genome

**Protein Pathways:**

Alzheimer's disease, Parkinson's disease

**Product images:**

Western Blot: alpha-Synuclein Antibody (2A7) TA336706 - Blots of TA336706 on recombinant alpha-synuclein (left lane) and crude extract of mouse brain (right lane, courtesy Rogan Tinsley, Howard Florey Institute, University of Melbourne).



Immunocytochemistry/Immunofluorescence:  
alpha-Synuclein Antibody (2A7) TA336706 - Mixed  
neuron-glia cultures stained with TA336706, our  
monoclonal antibody to alpha-synuclein (red) and  
chicken polyclonal antibody to MAP2 NB300-213  
(green). The alpha-s