Technical Data Sheet

Purified Mouse Anti-α-Synuclein

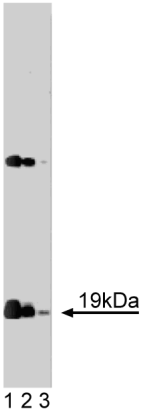
Product Information

Material Number:	**610786**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	42/α-Synuclein
Immunogen:	Rat Synuclein-1 aa. 15-123
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Human, Mouse
Target MW:	19 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

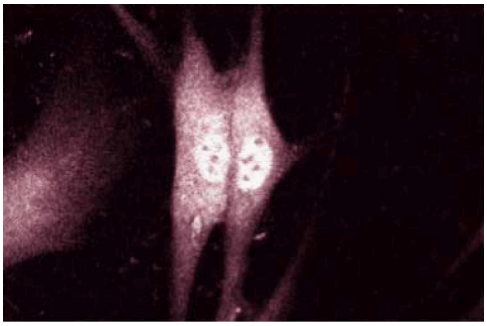
Description

Synuclein cDNA was isolated from Torpedo californica and found to encode a 143 amino acid neuron-specific protein. In addition, a rat brain cDNA library yielded several clones that encode different proteins with homology to Torpedo Synuclein. A 140 amino acid protein in rat is referred to as Synuclein-1. In situ hybridization shows synuclein mRNAs in discrete areas of rat brain, notably the hippocampus. In humans, two synuclein proteins of 140 and 134 amino acids were sequenced that exhibit a high degree of homology with each other (61% identity) and with previously described Synuclein proteins. The 140 amino acid protein (α-Synuclein) is the human homologue of rat Synuclein-1 and is identical to the non-amyloid-β component precursor (NACP), a presynaptic protein involved in amyloidogenesis in Alzheimer's disease (AD). The 134 amino acid protein (β-Synuclein) is the human homologue of bovine phosphoneuroprotein. These proteins are expressed in brain, primarily in presynaptic nerve terminals. Although the exact function of the Synucleins has not been determined, they have been linked to the prominent neurodegenerative disorders AD and Parkinson's disease.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Western blot analysis of α-Synuclein on rat brain lysate. *Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of α-Synuclein antibody.*



Immunofluorescent staining of human fibroblast cells with anti-α-Synuclein.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

BD Biosciences

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunohistochemistry	Reported

Suggested Companion Products

Catalog Number	Name	Size	Clone
611463	Rat Cerebrum Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Igs (Multiple Adsorption)	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Jo E, McLaurin J, Yip CM, St George-Hyslop P, Fraser PE. alpha-Synuclein membrane interactions and lipid specificity. *J Biol Chem.* 2000; 275(44):34328-34334. (Clone-specific)

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Maroteaux L, Campanelli JT, Scheller RH. Synuclein: a neuron-specific protein localized to the nucleus and presynaptic nerve terminal. *J Neurosci.* 1988; 8(8):2804-2815.(Biology)

Ostrerova-Golts N, Petrucelli L, Hardy J, Lee JM, Farer M, Wolozin B. The A53T alpha-synuclein mutation increases iron-dependent aggregation and toxicity. *J Neurosci.* 2000; 20(16):6048-6054.(Clone-specific: Immunofluorescence, Western blot)

van der Putten H, Wiederhold KH, Probst A, et al. Neuropathology in mice expressing human alpha-synuclein. *J Neurosci.* 2000; 20(16):6021-6029. (Clone-specific: Immunohistochemistry)

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