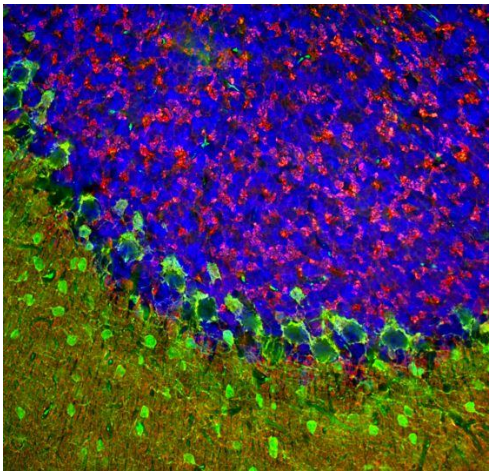
NEUROMICS

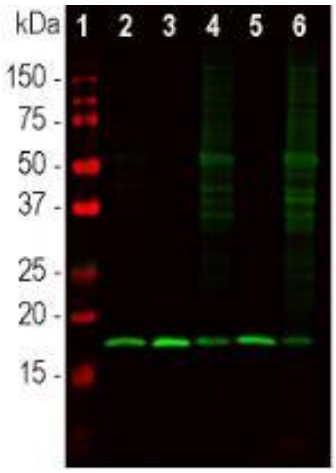
Beta-Synuclein Data Sheet

Catalog Number:	RA22141	**Host:**	Rabbit
Product Type:	Rabbit polyclonal IgG	**Species Reactivity:**	Human, rat, and mouse
Immunogen Sequence:	C-terminal peptide of human β-synuclein EPEGESYEDPPQEEYQEYEPEA coupled to KLH	**Format:**	Purified antibody at 1mg/mL in 50% PBS, 50% glycerol plus 5mM NaN3
Applications:	Immunofluorescent: 1:1,000-2,000 Immunocytochemistry: 1:1,000-2,000 Western Blot: 1:1,000-2,000		
	Dilutions listed as a recommendation. Optimal dilution should be determined by investigator.		
Storage:	Antibody can also be aliquotted and stored frozen at -20° C in a manual defrost freezer for six months without detectable loss of activity. The antibody is stable at 2° - 8° C for 1 year. Avoid repeated freeze-thaw cycles.		

Application Notes

Description/Data:
β-synuclein is a member of the synuclein protein family, the other two members being α and γ-synuclein, each protein being coded for by a distinct but related gene. α-synuclein was originally isolated as a major synaptic vesicle associated protein from the electric organ of the fish *Torpedo*, and direct homologues of α-synuclein are found in all vertebrates. Later work connected α-synuclein expression with several human brain pathologies, so that it is a major component of the Lewy bodies of Parkinson's disease. β-synuclein was isolated as a component of normal and diseased human brain as a protein clearly related to but distinct from α-synuclein. The human β-synuclein molecule is 134 amino acids in size compared to 140 amino acids for α-synuclein, and the N-terminal halves of the two molecules are virtually identical while the C-terminal regions is more variable.





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Images: ***Immunofluorescence:*** *Immunofluorescent analysis of rat cerebellum section stained with rabbit pAb to β-synuclein dilution 1:1,000 in red, and costained with chicken pAb to parvalbumin dilution 1:5,000 in green. The blue is Hoechst staining of nuclear DNA. The β-synuclein antibody detects protein concentrated in synaptic regions, and parvalbumin antibody labels the perikarya and dendrites of Purkinje cells, and interneurons in the molecular layer of the cerebellum.* ***Western Blot:*** *Western blot analysis of different tissue lysates using rabbit pAb to β-synuclein, RA22141, dilution 1:1,000 in green: [1] protein standard (red), [2] mouse cerebellum [3] mouse hippocampus, [4] rat cerebellum, [5] rat hippocampus, and [6] cow cerebellum. Strong band at about 17kDa corresponds to the β-synuclein protein.*

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