



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		

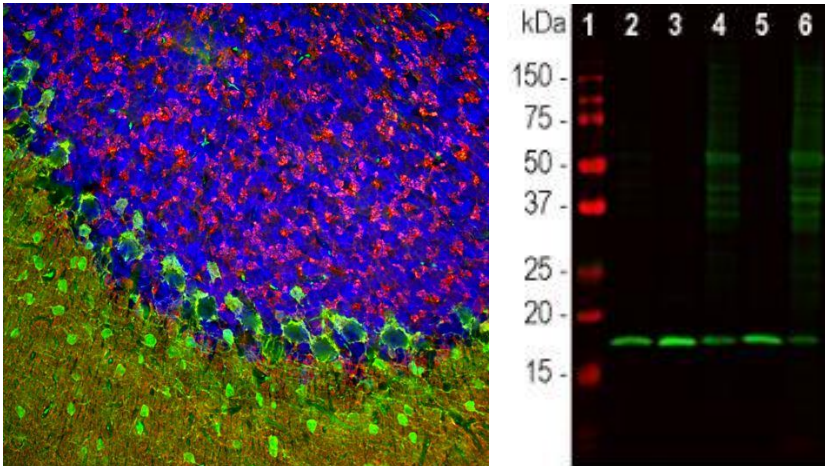
Dilutions listed as a recommendation. Optimal dilution should be determined by investigator.

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 $2^{\circ} - 8^{\circ}\text{C}$ 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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