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Synuclein Family

National Cancer Institute

Source

National Cancer Institute. *Synuclein Family*. NCI Thesaurus. Code C21217.

Small, soluble Synuclein Family proteins are a group of highly conserved post-transcriptionally modified Alpha, Beta, and Gamma proteins expressed primarily in neural tissue and often localized near synaptic vesicles. Synucleins may inhibit PLD2 and regulate vesicular transport. In the N-terminal portion, synucleins have a conserved repeated 11-residue amphipathic alpha-helical motif similar to the lipid-binding A2 domain of apolipoproteins. Synucleins also contain several repeated variations of a highly conserved KTKEGV domain, also present in rho family proteins. In brain, synucleins may be phosphorylated by Ca²⁺ calmodulin protein kinase II. Synucleins are overexpressed in breast carcinomas and mutations are associated with neurodegenerative illnesses.