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Cerebellin
Synthetic Peptide
Catalog # SP2095b

Specification

Cerebellin - Product Information

Primary Accession	P63181
Other Accession	P23435, Q9R171, P86437, P63182
Sequence	**SGSAKVA(FS)AIRSTNH**

Cerebellin - Additional Information

Other Names
Cerebellin-1, Precerebellin, Cerebellin, CER, [des-Ser1]-cerebellin, Cbln1

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Cerebellin - Protein Information

Name Cbln1

Function
Required for synapse integrity and synaptic plasticity. During cerebellar synapse formation, essential for the matching and maintenance of pre- and post-synaptic elements at parallel fiber-Purkinje cell synapses, the establishment of the proper pattern of climbing fiber-Purkinje cell innervation, and induction of long-term depression at parallel fiber-Purkinje cell synapses. Plays a role as a synaptic organizer that acts bidirectionally on both pre- and post- synaptic components. On the one hand induces accumulation of synaptic vesicles in the pre-synaptic part by binding with NRXN1 and in other hand induces clustering of GRID2 and its associated proteins at the post-synaptic site through association of GRID2. NRXN1-CBLN1-GRID2 complex directly induces parallel fiber protrusions that encapsulate spines of Purkinje cells leading to accumulation of GRID2 and synaptic vesicles. Required for CBLN3 export from the endoplasmic reticulum and secretion (By similarity). NRXN1-CBLN1-GRID2 complex mediates the D- Serine-dependent long term depression signals and AMPA receptor endocytosis (By similarity). Essential for long-term maintenance but not establishment of excitatory synapses (By similarity). Inhibits the formation and function of inhibitory GABAergic synapses in cerebellar Purkinje cells (By similarity).

Cellular Location
Secreted {ECO:0000250|UniProtKB:Q9R171}. Postsynaptic cell membrane {ECO:0000250|UniProtKB:Q9R171}

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Tissue Location
Localized in the Purkinje cells. Cerebellin and [des-Ser1]-cerebellin are equally abundant

Cerebellin - Images