Recombinant CV039 protein (His tag)

Catalog Number	545217
Synonyms	Plasticity-associated neural transcript short
Species	Human
Expression System	E. coli
Accession	Q6P5X5
Molecular Weight	Predictes a molecular mass of 14.19 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 15 kDa band.

Product Information

Sequence Region	1-105
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-105 aa (Q6P5X5) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Introducing the recombinant human Synaptic plasticity regulator PANTS (Plasticity-associated neural transcript short) fragment (amino acids 1-105), a high-quality protein tool designed for investigating synaptic plasticity mechanisms. This fragment, derived from the C22orf39 gene, is engineered for stability and solubility, making it ideal for structural studies, biochemical assays, and functional analyses in neuroscience research. The full-length Synaptic plasticity regulator PANTS protein, encoded by the C22orf39 gene in Homo sapiens, plays a critical role in modulating adult synaptic plasticity by negatively regulating long-term potentiation. It functions by stabilizing the interaction of RTN4 isoform A/Nogo-A with its receptors, thereby inhibiting the clustering of postsynaptic AMPA receptors at synaptic sites. Upon neuronal stimulation, PANTS is degraded at synapses, which reduces RTN4 signaling and permits AMPA receptor clustering, facilitating synaptic transmission. Subcellularly, PANTS is localized to synapses and the synaptic cleft, where it is detected in both presynaptic and postsynaptic regions and is secreted from neurons into the cleft, potentially via neuronal dense core vesicles involved in neuropeptide release. This protein is essential for understanding the molecular basis of synaptic adaptability and neuronal communication.