# Recombinant CAPS2 protein (His tag)

| | |
|---|---|
| **Catalog Number** | 540636 |
| **Synonyms** | Calcium-dependent activator protein for secretion 2; CAPS-2 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q86UW7 |
| **Molecular Weight** | Predictes a molecular mass of 29.20 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 29 kDa band. |

## Product Information

| | |
|---|---|
| **Sequence Region** | 356-597 |
| **Form** | Lyophilized powder |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **Purity** | >85%, 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 356-597 aa (Q86UW7) 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.<br>Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise. |

## Description

| | |
|---|---|
| **Description** | Recombinant Human CADPS2 (CAPS-2) Fragment (aa 356-597) is a high-purity protein designed for studying calcium-regulated exocytosis and vesicle dynamics. This fragment specifically includes the PH domain (aa 487-590), making it an ideal tool for investigating domain-specific interactions in neurotransmitter and neuropeptide secretion pathways.<br>Calcium-dependent secretion activator 2 (CAPS-2/CADPS2) is a calcium-binding protein critical for exocytosis of neurotransmitter-filled vesicles and neuropeptides. It functions upstream of membrane fusion in the biogenesis and maintenance of mature secretory vesicles, particularly regulating neurotrophin release during cerebellar development. The protein specifically mediates calcium-dependent exocytosis of dense-core vesicles. CAPS-2 localizes to cytoplasmic vesicle membranes, synapses, cilia, and synaptic fractions, showing distinct vesicular enrichment in granule cell parallel fiber terminals separate from synaptic vesicles. Its membrane association and specific vesicle targeting make it crucial for understanding regulated secretion mechanisms in neuronal function and development. |