Recombinant C2D1A protein (His tag)

Catalog Number	542913
Synonyms	Akt kinase-interacting protein 1; Five prime repressor element under dual repression-binding protein 1; FRE under dual repression-binding protein 1; Freud-1; Putative NF-kappa-B-activating protein 023N
Species	Human
Expression System	E. coli
Accession	Q6P1N0
Molecular Weight	Predictes a molecular mass of 38.37 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 39 kDa band.

Product Information

Sequence Region	488-811
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 488-811 aa (Q6P1N0) 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	Recombinant Human CC2D1A Fragment (488-811) is a high-purity protein product encompassing the C2 functional domain of Coiled-coil and C2 domain-containing protein 1A. This fragment serves as an essential tool for investigating domain-specific interactions, transcriptional regulation, and signaling pathways in neuronal and cellular studies. The full-length CC2D1A protein, also known as Akt kinase-interacting protein 1 or Freud-1, is a multifunctional transcription factor that binds to the dual repressor element (DRE) to repress HTR1A gene transcription in neuronal cells. It plays a critical role in synapse maturation and has been implicated in anxiety and major depression through altered HTR1A regulation. CC2D1A exhibits distinct roles based on its subcellular localization: it acts as a scaffold in the cytoplasmic PI3K/PDK1/AKT pathway, functions as a repressor of HTR1A in the nucleus, and regulates centriole cohesion at the centrosome during mitosis. The protein's activity is modulated by calcium and ATP, which specifically inactivate its binding to the FRE element.