Recombinant PTHD1 protein (His tag)

Catalog Number	548019
Species	Human
Expression System	E. coli
Accession	Q96NR3
Molecular Weight	Predictes a molecular mass of 28.33 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 28 kDa band.

Product Information

Sequence Region	41-272
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 41-272 aa (Q96NR3) 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 Patched domain-containing protein 1 (PTCHD1) Fragment (aa 41-272) - A high-quality protein fragment specifically designed for structural and biochemical studies of this important neuronal development protein. This 232-amino acid fragment represents a stable, soluble unit ideal for investigating PTCHD1's functional mechanisms. Patched domain-containing protein 1 (PTCHD1) is essential for the development and function of the thalamic reticular nucleus (TRN), a critical thalamic region involved in thalamocortical transmission, sleep rhythm generation, sensorimotor processing, and attention. Recent research demonstrates that PTCHD1 can bind cholesterol in vitro, suggesting potential roles in lipid-mediated signaling pathways. The protein localizes to the cell membrane as a multi-pass membrane protein and is also found in dendritic spines, indicating its involvement in neuronal connectivity and synaptic function. Mutations in PTCHD1 have been associated with neurodevelopmental disorders, highlighting its importance in proper brain function.