Recombinant TBC31 protein (His tag)

Catalog Number	547933
Synonyms	WD repeat-containing protein 67
Species	Human
Expression System	E. coli
Accession	Q96DN5
Molecular Weight	Predictes a molecular mass of 52.97 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 55 kDa band.

Product Information

Sequence Region	411-835
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 411-835 aa (Q96DN5) 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 TBC1 domain family member 31 (TBC1D31) fragment (residues 411-835), a meticulously engineered protein that encompasses the complete Rab-GAP TBC domain. This high-purity fragment serves as an essential tool for researchers investigating cilium biogenesis and intracellular signaling pathways, enabling focused studies on domain-specific functions. TBC1D31, also known as WD repeat-containing protein 67, functions as a molecular adapter critically involved in cilium biogenesis. It operates within a functional complex alongside OFD1, a centriolar protein essential for cilium assembly. TBC1D31 regulates cAMP-dependent phosphorylation of OFD1 and its subsequent ubiquitination by PJA2, ultimately leading to proteasomal degradation—a key regulatory mechanism in cellular processes. The protein localizes to multiple subcellular compartments including the cytoplasm, centrosome, centriolar satellite, and cilium basal body, highlighting its central role in microtubule organization and cellular architecture.