Recombinant TBA1A protein (His tag)

Catalog Number	545280
Synonyms	Alpha-tubulin 3; Tubulin B-alpha-1; Tubulin alpha-3 chain
Species	Human
Expression System	E. coli
Accession	Q71U36
Molecular Weight	Predictes a molecular mass of 51.79 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 55 kDa band.

Product Information

Sequence Region	1-451
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 1-451 aa (Q71U36) 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 Tubulin alpha-1A chain (TUBA1A) fragment (residues 1-451) is a high-purity, soluble protein designed for structural and biochemical studies. This fragment captures the essential GTP-binding and microtubule-forming domains, enabling researchers to investigate cytoskeletal dynamics and tubulin function in vitro. Tubulin alpha-1A chain is a critical component of microtubules, cylindrical structures formed by alpha- and beta-tubulin heterodimers. As the major constituent of the cytoskeleton, it supports cell division, intracellular transport, and maintenance of cell shape. Microtubules polymerize through the addition of GTP-bound tubulin dimers at their ends, where alpha-tubulin's GTPase activity hydrolyzes GTP to GDP, regulating microtubule stability and dynamics. This protein is localized to the cytoplasm and cytoskeleton, including flagellar axonemes, underscoring its role in cellular structure and motility. The recombinant fragment (1-451) includes key functional regions, providing a stable tool for exploring tubulin's mechanistic roles in cellular processes.