Recombinant TBB2 protein (His tag)

Catalog Number	534126
Synonyms	Beta-2-tubulin
Species	Drosophila melanogaster
Expression System	E. coli
Accession	P61857
Gene ID	41124
Molecular Weight	Predictes a molecular mass of 51.53 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 55 kDa band.

Product Information

Sequence Region	1-446
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 1-446 aa (P61857) 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 Tubulin beta-2 chain (Beta-2-tubulin) fragment from Drosophila melanogaster, encompassing amino acids 1-446, is a highly stable and soluble protein unit ideal for structural studies and biochemical assays investigating microtubule dynamics and cytoskeletal function. Tubulin beta-2 chain, encoded by the betaTub85D gene, is a key structural component of microtubules, which form cylindrical structures through the lateral association of alpha- and beta-tubulin heterodimers. These microtubules are essential for cellular architecture, intracellular transport, and cell division. The protein facilitates microtubule elongation by incorporating GTP-bound tubulin dimers at the growing end, where a stabilizing cap is established. Following incorporation, GTP hydrolysis by alpha-tubulin converts the dimers to a GDP-bound state, influencing microtubule stability and dynamics. This protein is localized to the cytoplasm and cytoskeleton, underscoring its central role in maintaining cellular structure and facilitating critical processes such as mitosis and organelle positioning.