Recombinant BUB3 protein (His tag)

Catalog Number	532444
Synonyms	Budding uninhibited by benzimidazole 3
Species	Caenorhabditis elegans
Expression System	E. coli
Accession	Q9XWH0
Gene ID	175018
Molecular Weight	Predictes a molecular mass of 39.78 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 40 kDa band.

Product Information

Sequence Region	1-343
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 1-343 aa (Q9XWH0) 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 Mitotic Checkpoint Protein Bub-3 (Budding Uninhibited by Benzimidazole 3) from Caenorhabditis elegans, encompassing amino acids 1-343. This fragment is engineered for stability and solubility, making it ideal for structural studies, biochemical assays, and research on spindle-assembly checkpoint signaling and kinetochore-microtubule dynamics. The full-length Mitotic Checkpoint Protein Bub-3 plays a dual role in spindle-assembly checkpoint signaling and the establishment of correct kinetochore-microtubule attachments, essential for chromosomal segregation during cell division. It promotes stable end-on bipolar attachments of chromosomes and is necessary for the expression and kinetochore localization of Bub-1. Additionally, Bub-3 contributes to synapsis checkpoint signaling by inducing apoptosis in response to unsynapsed chromosomes, thereby regulating oocyte meiosis. Subcellularly, it localizes to the chromosome centromere and kinetochore during late prophase and metaphase, with its kinetochore localization dependent on Bub-1, and is also found in the nucleus. This protein is critical for ensuring genomic integrity through its involvement in mitotic and meiotic checkpoints.