Recombinant KIF4B protein (His tag)

Catalog Number	540403
Synonyms	Chromokinesin-B
Species	Human
Expression System	E. coli
Accession	Q2VIQ3
Molecular Weight	Predictes a molecular mass of 54.30 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 57 kDa band.

Product Information

Sequence Region	1-473
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 1-473 aa (Q2VIQ3) 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 Chromosome-associated kinesin KIF4B (Chromokinesin-B) Fragment (aa 1-473) is a high-purity protein designed for studying kinesin motor domain functions. This fragment encompasses the critical motor domain (aa 9-336), making it an ideal tool for investigating chromosome segregation, spindle dynamics, and cytokinesis mechanisms in cellular division research. Chromosome-associated kinesin KIF4B is an iron-sulfur cluster-binding motor protein essential for proper chromosome segregation during mitosis. It facilitates the translocation of PRC1 to microtubule plus ends during the metaphase-to-anaphase transition, which is crucial for forming the central spindle midzone and midbody required for successful cytokinesis. The protein also contributes to mitotic chromosomal positioning and bipolar spindle stabilization. KIF4B localizes to the nuclear matrix and cytoskeleton, underscoring its roles in structural organization and mechanical processes during cell division. This recombinant fragment preserves the functional kinesin motor domain, enabling targeted studies of its mechanochemical properties in mitotic regulation.