Recombinant BUB1B protein (His tag)

Catalog Number	541818
Synonyms	MAD3/BUB1-related protein kinase; hBUBR1; Mitotic checkpoint kinase MAD3L; Protein SSK1
Species	Human
Expression System	E. coli
Accession	O60566
Molecular Weight	Predictes a molecular mass of 40.15 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 41 kDa band.

Product Information

Sequence Region	720-1050
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 720-1050 aa (O60566) 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 BUB1B Kinase Domain Fragment (720-1050) - A high-purity protein fragment encompassing the complete protein kinase domain of Mitotic checkpoint serine/threonine-protein kinase BUB1 beta, ideal for studying mitotic checkpoint mechanisms and kinase activity in cell cycle regulation. Mitotic checkpoint serine/threonine-protein kinase BUB1B is an essential component of the mitotic checkpoint that ensures proper chromosome segregation during cell division. This kinase plays a critical role in delaying anaphase until all chromosomes are correctly attached to the mitotic spindle, primarily by inhibiting the anaphase-promoting complex/cyclosome (APC/C) and monitoring kinetochore activities dependent on CENPE. BUB1B localizes to kinetochores during early prophase and requires BUB1, PLK1, and KNL1 for proper kinetochore association. Beyond its checkpoint functions, BUB1B negatively regulates PLK1 activity in interphase cells, suppresses centrosome amplification, and triggers apoptosis in aberrant polyploid cells, suggesting important tumor suppression roles. The protein exhibits dynamic subcellular localization, being cytoplasmic in interphase cells and associating with chromosomes, centromeres, kinetochores, and centrosomes during mitosis.