Recombinant MARK1 protein (His tag)

Catalog Number	541422
Synonyms	MAP/microtubule affinity-regulating kinase 1; PAR1 homolog c; Par-1c; Par1c
Species	Human
Expression System	E. coli
Accession	Q9P0L2
Molecular Weight	Predictes a molecular mass of 38.31 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 40 kDa band.

Product Information

Sequence Region	55-372
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 55-372 aa (Q9P0L2) 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 Serine/threonine-protein kinase MARK1 (EC 2.7.11.1, EC 2.7.11.26) fragment (residues 55-372) is a high-purity protein ideal for investigating kinase activity, microtubule regulation, and cell polarity mechanisms. This 318-amino acid fragment includes the complete Protein kinase and UBA domains, making it a valuable tool for targeted functional studies. MARK1 is a serine/threonine-protein kinase that plays a critical role in regulating cell polarity and microtubule dynamics. It phosphorylates microtubule-associated proteins such as DCX, MAP2, MAP4, and MAPT/TAU at KXGS motifs, leading to their detachment from microtubules and subsequent disassembly. MARK1 is also involved in neuronal migration and acts as a positive regulator of the Wnt signaling pathway, likely through phosphorylation of dishevelled proteins (DVL1, DVL2, and/or DVL3). Subcellularly, it localizes to the cell membrane (as a peripheral membrane protein), cytoplasm, cytoskeleton, and cell projections such as dendrites, suggesting its involvement in diverse cellular compartments and processes.