Recombinant MARK2 protein (His tag)

Catalog Number	545282
Synonyms	ELKL motif kinase 1; EMK-1; MAP/microtubule affinity-regulating kinase 2; PAR1 homolog; PAR1 homolog b; Par-1b; Par1b
Species	Human
Expression System	E. coli
Accession	Q7KZI7
Molecular Weight	Predictes a molecular mass of 38.29 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 39 kDa band.

Product Information

Sequence Region	48-364
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 48-364 aa (Q7KZI7) 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 MARK2 (48-364) is a high-purity fragment encompassing the complete Protein kinase and UBA domains. This product is an essential tool for investigating kinase activity, microtubule dynamics, and cellular polarity mechanisms in experimental models. MARK2 is a serine/threonine-protein kinase critical for regulating cell polarity and microtubule dynamics. It phosphorylates key substrates including MAPT/TAU, MAP2, MAP4, DCX, and KIF13B, leading to microtubule detachment and disassembly. The kinase plays a fundamental role in neuronal migration, axogenesis, neurite outgrowth, and epithelial cell polarity establishment. Additionally, MARK2 functions as a positive regulator of Wnt signaling and modulates histone deacetylase activity through HDAC7 phosphorylation. The protein localizes to multiple cellular compartments including the cell membrane (as a peripheral membrane protein), cytoplasm, cytoskeleton, lateral cell membrane, and dendrites, with phosphorylation-dependent regulation of its subcellular distribution mediated by 14-3-3 protein interactions.