

## MRCK $\alpha$ Protein, Human (Sf9, GST)

Cat. No.:	HY-P701817
Synonyms:	CDC42BPA; Serine/threonine-protein kinase MRCK alpha; CDC42-binding protein kinase alpha; DMPK-like alpha; Myotonic dystrophy kinase-related CDC42-binding kinase alpha; MRCK alpha; Myotonic dystrophy protein kinase-like alpha
Species:	Human
Source:	Sf9 insect cells
Accession:	Q5VT25 (S2-Q473)
Gene ID:	8476
Molecular Weight:	

### PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 $\mu$ m filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

### DESCRIPTION

Background	MRCK $\alpha$ Protein, a serine/threonine-protein kinase, serves as a crucial downstream effector of CDC42, playing a pivotal role in orchestrating cytoskeleton reorganization and cell migration. Through phosphorylation of PPP1R12C and MYL9/MLC2, MRCK $\alpha$ actively regulates actin cytoskeletal reorganization. Teaming up with MYO18A and LURAP1, it contributes to the modulation of lamellar actomyosin retrograde flow, a process essential for cell protrusion and migration. MRCK $\alpha$ also phosphorylates PPP1R12A, LIMK1, and LIMK2, influencing various aspects of cellular dynamics. Furthermore, it may be involved in TFRC-mediated iron uptake and, in collaboration with FAM89B/LRAP25, facilitates the targeting of LIMK1 to the lamellipodium, leading to its activation and subsequent phosphorylation of CFL1—an event crucial for the regulation of lamellipodial F-actin. Additionally, MRCK $\alpha$ triggers the formation of an extrusion apical actin ring, playing a vital role in the epithelial extrusion of apoptotic cells.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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