Recombinant LIMK2 protein (His tag)

Catalog Number	544699
Synonyms	LIMK-2
Species	Human
Expression System	E. coli
Accession	P53671
Molecular Weight	Predictes a molecular mass of 29.15 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 29 kDa band.

Product Information

Sequence Region	1-244
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 1-244 aa (P53671) 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 LIM domain kinase 2 (LIMK-2) Fragment (1-244): A high-purity protein fragment encompassing the LIM zinc-binding 1, LIM zinc-binding 2, and PDZ domains. This product is an essential tool for investigating the structural and functional roles of these domains in actin dynamics, microtubule organization, and ciliogenesis regulation. LIM domain kinase 2 (LIMK-2), encoded by the gene LIMK2 in Homo sapiens, is a serine/threonine-protein kinase critical for regulating actin filament dynamics and functioning downstream of Rho family GTPase signaling pathways. It plays a key role in organizing astral microtubules and mitotic spindle orientation during early mitosis by phosphorylating TPPP. Additionally, LIMK-2 suppresses ciliogenesis through multiple mechanisms, including phosphorylation of CFL1, inhibition of ciliary vesicle trafficking, and facilitation of YAP1 nuclear localization to repress TEAD4 target genes like AURKA and PLK1. The protein is primarily localized in the cytoplasm, cytoskeleton, spindle, centrosome, and perinuclear regions, with isoforms also present in the nucleus, highlighting its diverse cellular roles in structural and signaling contexts.