Recombinant WDR83 protein (His tag)

Catalog Number	545802
Synonyms	Mitogen-activated protein kinase organizer 1; MAPK organizer 1
Species	Human
Expression System	E. coli
Accession	Q9BRX9
Molecular Weight	Predictes a molecular mass of 36.00 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 38 kDa band.

Product Information

Sequence Region	1-315
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 1-315 aa (Q9BRX9) 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 WD repeat domain-containing protein 83 (WDR83), encompassing amino acids 1-315, is a high-purity protein fragment designed for structural and functional studies. This fragment represents a stable and soluble unit of the protein, ideal for investigating its roles as a molecular scaffold in ERK signaling, mTORC1 regulation, and cellular polarity. WD repeat domain-containing protein 83 (WDR83), also known as Mitogen-activated protein kinase organizer 1, functions as a versatile molecular scaffold in multiple cellular processes. It assembles multicomponent complexes for the ERK pathway, modulating ERK activation in a concentration-dependent manner and linking responses to specific agonists. Under nutrient-rich conditions, WDR83 acts as a negative regulator of mTORC1 by binding active Rag GTPases, inhibiting mTORC1 lysosomal localization and promoting basal autophagy. Additionally, it participates in tight junction development by regulating apico-basal polarity through interactions with PARD6B and CRB3, and responds to hypoxia by negatively regulating HIF1A via EGLN3/PHD3. WDR83 is predominantly localized in the cytoplasm, with partial nuclear presence, and is also found at lysosomes, reflecting its diverse functional roles in signaling and cellular organization.