Recombinant MRTFA protein (His tag)

Catalog Number	545627
Synonyms	MRTF-A; MKL/myocardin-like protein 1; Megakaryoblastic leukemia 1 protein; Megakaryocytic acute leukemia protein
Species	Human
Expression System	E. coli
Accession	Q969V6
Molecular Weight	Predictes a molecular mass of 12.59 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 13 kDa band.

Product Information

Sequence Region	1-94
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 1-94 aa (Q969V6) 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	Introducing the recombinant human Myocardin-related transcription factor A (MRTF-A) fragment (amino acids 1-94), a stable and soluble protein unit ideal for structural and biochemical studies. This fragment supports research into cytoskeletal gene regulation and cell migration mechanisms by enabling detailed analysis of MRTF-A's functional domains. Myocardin-related transcription factor A (MRTF-A) is a key transcription coactivator that partners with serum response factor (SRF) to regulate genes involved in cytoskeletal dynamics, development, morphogenesis, and cell migration. Its activity is modulated by Rho GTPase-induced changes in cellular G-actin concentrations, linking cytoskeletal gene expression to actin dynamics. MRTF-A shuttles between the cytoplasm and nucleus, with its localization controlled by G-actin binding: cytoplasmic G-actin inhibits nuclear import by masking the nuclear localization signal, while nuclear G-actin promotes export. Nuclear retention is enhanced by factors like MICAL2, which reduces nuclear G-actin levels, facilitating MRTF-A-SRF complex formation and transcriptional activation. This intricate regulation underscores MRTF-A's role in cellular responses to mechanical and signaling cues.