Recombinant CAVN4 protein (His tag)

Catalog Number	540447
Synonyms	Muscle-related coiled-coil protein; Muscle-restricted coiled-coil protein
Species	Human
Expression System	E. coli
Accession	Q5BKX8
Molecular Weight	Predictes a molecular mass of 16.96 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 18 kDa band.

Product Information

Sequence Region	1-134
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 1-134 aa (Q5BKX8) 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 CAVIN4 (Caveolae-associated protein 4) Fragment (1-134) is a high-quality, stable protein fragment designed for structural and biochemical studies. This product represents a soluble and stable region of CAVIN4, enabling researchers to investigate its role in caveolar morphology, cardiomyocyte signaling, and hypertrophic responses with enhanced experimental utility. Caveolae-associated protein 4 (CAVIN4), also known as the muscle-restricted coiled-coil protein, is a key modulator of caveolae morphology in cardiomyocytes. It facilitates the recruitment of MAPK1/3 to caveolae and regulates alpha-1 adrenergic receptor-induced hypertrophic responses through MAPK1/3 activation. Additionally, CAVIN4 contributes to the membrane localization and stabilization of caveolin-3 (CAV3), induces RHOA activation, and promotes NPPA transcription and myofibrillar organization via the Rho/ROCK signaling pathway. The protein localizes to multiple cellular compartments, including the cytoplasm, myofibril, sarcomere (specifically accumulating at the Z-line in cardiomyocytes), cytosol, sarcolemma, and caveolae membranes, where its caveolin-dependent localization underscores its functional importance in muscle cell signaling and structure.