Recombinant CAPG protein (His tag)

Catalog Number	537722
Synonyms	Actin regulatory protein CAP-G
Species	Human
Expression System	E. coli
Accession	P40121
Molecular Weight	Predictes a molecular mass of 40.16 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 41 kDa band.

Product Information

Sequence Region	1-348
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 1-348 aa (P40121) 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 Macrophage-capping protein (Actin regulatory protein CAP-G), corresponding to amino acids 1-348 of the human sequence, is a high-purity fragment designed for structural and biochemical studies. This soluble and stable protein unit retains key functional properties, enabling researchers to investigate actin filament regulation and its implications in cellular dynamics. Macrophage-capping protein (CAPG) is a calcium-sensitive actin regulatory protein that reversibly blocks the barbed ends of actin filaments without severing preformed filaments. It plays a critical role in macrophage function and may regulate cytoplasmic and nuclear structures through potential interactions with actin, with additional evidence suggesting DNA-binding capability. CAPG localizes to multiple subcellular compartments, including the nucleus, cytoplasm, melanosomes, and cell projections such as lamellipodia and ruffles. In macrophages, it is predominantly cytoplasmic and concentrates at the membrane-cytoplasm interface, particularly in the ruffles of leading lamellipodia during activation, highlighting its importance in cell motility and structural organization.