Recombinant ACTB protein (His tag)

Catalog Number	544740
Synonyms	Beta-actin
Species	Human
Expression System	E. coli
Accession	P60709
Molecular Weight	Predictes a molecular mass of 43.39 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 45 kDa band.

Product Information

Sequence Region	1-375
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 1-375 aa (P60709) 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 Actin, cytoplasmic 1 (Beta-actin) fragment (residues 1-375) is a high-purity protein designed for structural and biochemical studies. This fragment represents a stable, soluble unit of Actin, ideal for investigating cytoskeletal dynamics, nuclear functions, and microtubule nucleation mechanisms. Actin, cytoplasmic 1 (Beta-actin) is a highly conserved protein essential for cellular structure and motility. It polymerizes into filaments forming cross-linked networks in the cytoplasm and plays critical roles in cell contraction and motility. Beyond the cytoplasm, Actin localizes to the nucleus, where it regulates gene transcription and DNA repair processes. It also contributes to the assembly of the gamma-tubulin ring complex, facilitating microtubule nucleation, and forms part of the dynactin complex to enable processive transport along microtubules. Predominantly found in the cytoplasm and cytoskeleton, Actin also localizes to the nucleus and cytoplasmic mRNA granules, underscoring its multifunctional significance in cellular organization and regulatory pathways.