Recombinant ARP2 protein (His tag)

Catalog Number	537880
Synonyms	Actin-like protein 2
Species	Human
Expression System	E. coli
Accession	P61160
Molecular Weight	Predictes a molecular mass of 46.42 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 48 kDa band.

Product Information

Sequence Region	1-394
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 1-394 aa (P61160) 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-related protein 2 (Actin-like protein 2), corresponding to amino acids 1-394, is a high-purity fragment designed for structural and biochemical studies. This product captures a stable, soluble unit of the protein, ideal for investigating its role in actin polymerization and cytoskeletal dynamics. Actin-related protein 2 (encoded by ACTR2) is an ATP-binding component of the Arp2/3 complex, which mediates actin polymerization upon stimulation by nucleation-promoting factors. The complex is essential for forming branched actin networks in the cytoplasm, providing the mechanical force required for cell motility and lamellipodia formation in podocytes. Beyond the cytoplasm, the Arp2/3 complex also functions in the nucleus, where it promotes actin polymerization to regulate gene transcription and DNA repair processes, including homologous recombination repair by facilitating double-strand break motility. The protein localizes to the cytoplasm, cytoskeleton, cell projections, and the nucleus, underscoring its multifaceted roles in cellular architecture and genomic stability.