Recombinant ARPC2 protein (His tag)

Catalog Number	546443
Synonyms	Arp2/3 complex 34 kDa subunit; p34-ARC
Species	Human
Expression System	E. coli
Accession	O15144
Molecular Weight	Predictes a molecular mass of 35.99 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 38 kDa band.

Product Information

Sequence Region	1-300
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 1-300 aa (O15144) 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	This product is a recombinant fragment of the Actin-related protein 2/3 complex subunit 2 (Arp2/3 complex 34 kDa subunit, p34-ARC), derived from Homo sapiens and encompassing residues 1-300. It is designed to support structural and biochemical studies of actin polymerization and cytoskeletal dynamics, offering a stable and soluble unit for research applications. The full-length Actin-related protein 2/3 complex subunit 2, encoded by the ARPC2 gene, is an actin-binding component of the Arp2/3 complex, a multiprotein complex essential for mediating actin polymerization upon stimulation by nucleation-promoting factors. This complex facilitates the formation of branched actin networks in the cytoplasm, which are critical for generating the force required for cell motility. Additionally, the Arp2/3 complex promotes actin polymerization in the nucleus, where it regulates gene transcription and participates in DNA repair processes, such as homologous recombination repair by driving the motility of double-strand breaks in response to DNA damage. The protein localizes to the cytoplasm, cytoskeleton, cell projections, synapses, and the nucleus, underscoring its versatile roles in cellular architecture and nuclear functions.