Recombinant ACTT1 protein (His tag)

Catalog Number	543233
Synonyms	ARP-T1
Species	Human
Expression System	E. coli
Accession	Q8TDG2
Molecular Weight	Predictes a molecular mass of 43.35 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 43 kDa band.

Product Information

Sequence Region	1-376
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 1-376 aa (Q8TDG2) 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 T1 (ARP-T1) fragment (residues 1-376) is a high-quality, stable protein designed for structural and biochemical studies. This soluble fragment retains key functional regions, making it ideal for investigating ARP-T1's role in negatively regulating the Hedgehog signaling pathway. Actin-related protein T1 (ARP-T1), encoded by the ACTRT1 gene in Homo sapiens, functions as a negative regulator of the Hedgehog (SHH) signaling pathway. It binds to the promoter of GLI1, a key mediator of SHH signaling, and inhibits its expression, thereby modulating this critical developmental and oncogenic pathway. ARP-T1 localizes to multiple cellular compartments, including the cytoplasm, cytoskeleton, nucleus, and secretory vesicles such as the acrosome. Upon Hedgehog pathway stimulation, it translocates to the nucleus and associates with chromatin, highlighting its dynamic regulatory role. The provided recombinant fragment (residues 1-376) encompasses the full-length domain structure, selected for stability and solubility to facilitate experimental analysis of its molecular functions.