# Recombinant MACF1 protein (His tag)

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| **Catalog Number** | 541559 |
| **Synonyms** | 620 kDa actin-binding protein; ABP620; Actin cross-linking family protein 7; Macrophin-1; Trabeculin-alpha |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q9UPN3 |
| **Molecular Weight** | Predictes a molecular mass of 54.98 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 60 kDa band. |

## Product Information

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| **Sequence Region** | 71-527 |
| **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 71-527 aa (Q9UPN3) were fused with 6His tag. |

## Storage & Handling

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| **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.<br>Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise. |

## Description

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| **Description** | Introducing the recombinant protein fragment of Microtubule-actin cross-linking factor 1 (MACF1), encompassing amino acids 71-527. This fragment includes the critical Calponin-homology (CH) 1 and CH 2 domains, making it an ideal tool for investigating actin-binding properties and cytoskeletal cross-linking mechanisms in cellular dynamics.<br>MACF1 is a key cytoskeletal protein in Homo sapiens that cross-links actin filaments and microtubules, playing essential roles in cell structure, migration, and signaling. It stabilizes microtubules at the cell cortex, facilitates Wnt signaling by translocating AXIN1 complexes to the membrane, and regulates focal adhesion assembly and dynamics. The protein is involved in processes such as wound healing, neurite outgrowth, and vesicle transport, with isoforms localizing to the cytoplasm, cytoskeleton, Golgi apparatus, and cell membrane. The provided fragment, containing the CH domains, allows focused study on actin interaction and domain-specific functions without the complexity of the full-length protein. |