Recombinant WAC protein (His tag)

Catalog Number	545817
Species	Human
Expression System	E. coli
Accession	Q9BTA9
Molecular Weight	Predictes a molecular mass of 12.36 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band.

Product Information

Sequence Region	556-647
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 556-647 aa (Q9BTA9) 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 WAC Protein Fragment (556-647) is a highly stable and soluble 92-amino acid segment of the WW domain-containing adapter protein with coiled-coil (WAC), designed for structural and biochemical studies. This fragment supports research into WAC's critical roles in transcription regulation, histone modification, and cellular stress responses. The full-length WAC protein acts as a key molecular bridge connecting gene transcription with histone H2B monoubiquitination at Lys-120 (H2BK120ub1) through its WW domain interactions with RNA polymerase II and its coiled-coil region interactions with the RNF20-RNF40 complex. It plays pivotal roles in DNA damage checkpoint activation, amino acid starvation-induced autophagy (as a positive regulator), and basal autophagy (as a negative regulator). Additionally, WAC positively regulates MTOR activity by facilitating the assembly of the TTT-RUVBL complex, promoting mTORC1 dimerization and activation. It may also negatively regulate the ubiquitin proteasome pathway. WAC is primarily localized to nuclear speckles and associates with pre-mRNA processing complexes, underscoring its importance in nuclear regulatory mechanisms.