Recombinant ABC3C protein (His tag)

Catalog Number	543727
Synonyms	A3C; APOBEC1-like; Phorbolin I
Species	Human
Expression System	E. coli
Accession	Q9NRW3
Molecular Weight	Predictes a molecular mass of 24.48 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 24 kDa band.

Product Information

Sequence Region	1-190
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 1-190 aa (Q9NRW3) 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 APOBEC-3C (A3C) Fragment (1-190) is a high-purity protein designed for studying DNA deaminase activity and antiviral mechanisms. This fragment fully encompasses the CMP/dCMP-type deaminase domain, making it an ideal tool for investigating cytidine-to-uridine editing in single-stranded DNA and its roles in retroviral inhibition and epigenetic regulation. DNA dC->dU-editing enzyme APOBEC-3C (A3C), encoded by the APOBEC3C gene in Homo sapiens, functions as a cytidine deaminase that inhibits retrovirus replication and retrotransposon mobility through deaminase-dependent and -independent pathways. It induces G-to-A hypermutations in viral DNA by deaminating cytosine to uracil in minus-sense single-strand DNA during reverse transcription, effectively impairing pathogens such as simian immunodeficiency virus (SIV), hepatitis B virus (HBV), and herpes simplex virus 1 (HHV-1). Additionally, A3C may contribute to active DNA demethylation, influencing epigenetic gene regulation. The protein localizes to both the nucleus and cytoplasm, allowing it to target viral replication complexes in various cellular compartments. This recombinant fragment (residues 1-190) retains the critical deaminase domain, enabling focused research on its enzymatic and antiviral properties without interference from other regions of the full-length protein.