Recombinant ATF7 protein (His tag)

Catalog Number	546801
Synonyms	cAMP-dependent transcription factor ATF-7; Activating transcription factor 7; Transcription factor ATF-A
Species	Human
Expression System	E. coli
Accession	P17544
Molecular Weight	Predictes a molecular mass of 10.91 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 11 kDa band.

Product Information

Sequence Region	329-407
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 329-407 aa (P17544) 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	Introducing the recombinant human ATF7 protein fragment (residues 329-407), a high-purity tool designed for studying the bZIP domain's role in stress-responsive transcriptional regulation and chromatin remodeling. This fragment enables targeted investigation of ATF7's domain-specific functions in innate immunity, adipocyte differentiation, and telomere maintenance. The full-length ATF7 protein is a stress-responsive chromatin regulator that plays critical roles in innate immunological memory, adipocyte differentiation, and telomerase regulation. Under normal conditions, ATF7 contributes to heterochromatin formation by recruiting histone H3K9 methyltransferases, thereby silencing target genes involved in immunity and adipocyte function. During cellular stress, phosphorylated ATF7 disrupts heterochromatin structures and activates transcription through association with coactivators containing histone-modifying enzymes. ATF7 also participates in telomere regulation, where TNF-alpha-induced phosphorylation leads to its release from telomeres, contributing to telomere shortening. The protein primarily localizes to the nucleus and nucleoplasm, with specific isoforms showing distinct subcellular distributions - isoform 5 localizes to the cytoplasm where it acts as a negative regulator by sequestering phosphorylation kinases.