Recombinant MTF1 protein (His tag)

Catalog Number	544997
Synonyms	MRE-binding transcription factor; Transcription factor MTF-1
Species	Human
Expression System	E. coli
Accession	Q14872
Molecular Weight	Predictes a molecular mass of 21.91 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 22 kDa band.

Product Information

Sequence Region	139-314
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 139-314 aa (Q14872) 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 MTF1 Fragment (aa 139-314): A stable and soluble protein fragment derived from Metal regulatory transcription factor 1, optimized for structural and biochemical studies of zinc-dependent transcriptional regulation and cellular responses to heavy metals. Metal regulatory transcription factor 1 (MTF1) is a zinc-dependent transcriptional regulator essential for cellular adaptation to heavy metal exposure. It binds to metal responsive elements (MRE) in gene promoters, activating transcription of metallothionein genes such as MT2A, which play critical roles in metal detoxification and homeostasis. MTF1 also regulates metalloprotease expression in response to intracellular zinc, functioning as a catabolic regulator in cartilages. The protein localizes to both the nucleus and cytoplasm, with nuclear translocation induced by metal exposure, highlighting its dynamic role in stress response pathways. This recombinant fragment represents a structurally stable region selected for experimental applications, enabling detailed investigation of MTF1's molecular mechanisms.