Recombinant IF16 protein (His tag)

Catalog Number	547375
Synonyms	Ifi-16; Interferon-inducible myeloid differentiation transcriptional activator
Species	Human
Expression System	E. coli
Accession	Q16666
Molecular Weight	Predictes a molecular mass of 12.06 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 13 kDa band.

Product Information

Sequence Region	1-89
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 1-89 aa (Q16666) 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 Gamma-interferon-inducible protein 16 (Ifi-16) Fragment (1-89) is a high-purity protein designed for studying the Pyrin domain's role in innate immunity, transcriptional regulation, and inflammasome assembly. This fragment serves as an essential tool for investigating DNA-binding mechanisms, viral recognition, and cellular signaling pathways in a controlled experimental context. The full-length Gamma-interferon-inducible protein 16 (Ifi-16), encoded by the IFI16 gene in Homo sapiens, is a multifunctional protein involved in double-stranded DNA binding with preference for supercoiled and cruciform structures. It plays critical roles in transcriptional regulation, hematopoietic differentiation, and cellular proliferation control by modulating p53/TP53 and retinoblastoma protein functions. Ifi-16 is integral to innate immune responses, recognizing viral dsDNA in the cytosol and nucleus to induce IFN-beta production via TMEM173/STING recruitment, while also inhibiting AIM2 inflammasome activation. It localizes primarily to the nucleus but can shift to the cytoplasm based on acetylation status of its nuclear localization signal, with isoform IFI16-beta specifically cytoplasmic and involved in AIM2 inflammasome inhibition. The protein's Pyrin domain (residues 1-88) is central to these functions, making this recombinant fragment invaluable for domain-specific mechanistic studies.