Recombinant REG3A protein (His tag)

Catalog Number	540189
Synonyms	REG-3-alpha; Hepatointestinal pancreatic protein; HIP/PAP; Human proislet peptide; HIP; Pancreatitis-associated protein 1; Regenerating islet-derived protein III-alpha; Reg III-alpha
Species	Human
Expression System	E. coli
Accession	Q06141
Molecular Weight	Predictes a molecular mass of 18.22 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 18 kDa band.

Product Information

Sequence Region	27-175
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 27-175 aa (Q06141) 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 Regenerating islet-derived protein 3-alpha (REG-3-alpha) Fragment (residues 27-175) is a high-purity protein designed for studying the C-type lectin domain's bactericidal activity and signaling functions. This fragment is ideal for investigating Gram-positive bacterial killing, cell proliferation mechanisms, and inflammatory regulation in research applications. Regenerating islet-derived protein 3-alpha (REG-3-alpha) is a secreted protein in humans with multifaceted roles in innate immunity and tissue regeneration. Its 15 kDa form functions as a bactericidal C-type lectin, selectively targeting Gram-positive bacteria by binding peptidoglycan and forming membrane-permeabilizing pores. Additionally, REG-3-alpha acts as a signaling hormone, activated by stimuli like IL17A and gut microbiome, promoting keratinocyte proliferation and differentiation via EXTL3-PI3K-AKT pathway while suppressing inflammation. In the pancreas, it stimulates beta-cell proliferation. The protein is localized to secretory pathways, notably in pancreatic acinar cells, and exists in cleaved forms with distinct activities—the 16.5 kDa variant exhibits bacteriostatic properties. This recombinant fragment encompasses the critical C-type lectin domain, enabling focused studies on its antimicrobial and cell-signaling functions.