

Recombinant Mouse REG3G Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51138

Size: 10ug, 100ug

Protein Name: Regenerating islet-derived protein 3-gamma (REG-3-gamma) (Pancreatitis-associated protein 3) (Regenerating islet-derived protein III-gamma) (Reg III-gamma)
[Cleaved into: Regenerating islet-derived protein 3-gamma 16.5 kDa form; Regenerating islet-derived protein 3-gamma 15 kDa form]

Synonym: Reg3g, Pap3

UniProt ID: O09049

UniProt Link: www.uniprot.org/uniprotkb/O09049/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 174 AA

Molecular Weight: 19 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MLPRITITIMSWMLLSCLMLLSQVQGEVAKKDAPSSRSSCPKGSRAYGSYCYALFSVSKNWDADM
ACQKRPSGHLVSVLSGAEASFLSSMIKSSGNSGQYVWIGLHDPTLGYPEPNRGGWEWSNADVMNYI
NWETNPSSSSGNHCGTLRASGFLKWRENYCNLELPYVCKFKA

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Regenerating islet-derived protein 3-gamma (REG-3-gamma) (Pancreatitis-associated protein 3) (Regenerating islet-derived protein III-gamma) (Reg III-gamma) [Cleaved into: Regenerating islet-derived protein 3-gamma 16.5 kDa form; Regenerating islet-derived protein 3-gamma 15 kDa form] produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Bactericidal C-type lectin which acts exclusively against Gram-positive bacteria and mediates bacterial killing by binding to surface-exposed carbohydrate moieties of peptidoglycan. Restricts bacterial colonization of the intestinal epithelial surface and consequently limits activation of adaptive immune responses by the microbiota.; Acts as a hormone in response to different stimuli like anti-inflammatory signals, such as IL17A, or gut microbiome. Is secreted by different cell types to activate its receptor EXTL3 and induce cell specific signaling pathways (PubMed:22727489, PubMed:27830702, PubMed:36240758). Induced by IL17A in keratinocytes, regulates keratinocyte proliferation and differentiation after skin injury (PubMed:22727489). In parallel, inhibits skin inflammation through the inhibition of inflammatory cytokines such as IL6 and TNF (PubMed:27830702). Induced by IL22 in lung epithelial cells, inhibits cytokine production and regulates allergic airway inflammation (PubMed:28811323). Induced in small intestine by inulin-enriched diet and Lactobacillus gasseri enriched microbiome, plays a role in the improvement of gut barrier function, the regulation of energy balance and glucose levels. Modulates microbiota composition in duodenal contents (PubMed:36240758). Produced by nociceptor in response to endotoxins, prevents endotoxic death by targeting kynurenine pathway in microglia (PubMed:35263589).; [Regenerating islet-derived protein 3-gamma 16.5 kDa form]: Has bacteriostatic activity.; [Regenerating islet-derived protein 3-gamma 15 kDa form]: Has bactericidal activity against L.monocytogenes and methicillin-resistant S.aureus.

Subcellular Localization: Secreted . Cytoplasm .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.