

## REG-3 gamma/REG3G Protein, Human (149a.a, HEK293, His)

<b>Cat. No.:</b>	HY-P71256
<b>Synonyms:</b>	Regenerating islet-derived protein 3-gamma; REG-3-gamma; Pancreatitis-associated protein 1B; REG3G; PAP-1B; Regenerating islet-derived protein III-gamma
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	Q6UW15-1 (E27-D175)
<b>Gene ID:</b>	130120
<b>Molecular Weight:</b>	17-19 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>E E T Q K E L P S P      R I S C P K G S K A      Y G S P C Y A L F L      S P K S W M D A D L</p> <p>A C Q K R P S G K L      V S V L S G A E G S      F V S S L V R S I S      N S Y S Y I W I G L</p> <p>H D P T Q G S E P D      G D G W E W S S T D      V M N Y F A W E K N      P S T I L N P G H C</p> <p>G S L S R S T G F L      K W K D Y N C D A K      L P Y V C K F K D</p>
<b>Biological Activity</b>	Data is not available.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	<p>REG-3 gamma/REG3G Protein, a bactericidal C-type lectin, acts exclusively against Gram-positive bacteria by binding to surface-exposed carbohydrate moieties of peptidoglycan, thereby mediating bacterial killing. This protein restricts bacterial colonization of the intestinal epithelial surface, consequently limiting the activation of adaptive immune responses by the microbiota. It functions as a hormone in response to various stimuli, including anti-inflammatory signals like IL17A or the gut microbiome. REG-3 gamma/REG3G Protein is secreted by different cell types to activate its receptor EXTL3, leading to the induction of cell-specific signaling pathways. In keratinocytes, it is induced by IL17A and regulates keratinocyte</p>
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proliferation and differentiation following skin injury while inhibiting skin inflammation by suppressing inflammatory cytokines such as IL6 and TNF. In lung epithelial cells, REG-3 gamma/REG3G Protein is induced by IL22, inhibiting cytokine production and regulating allergic airway inflammation. Additionally, it is induced in the small intestine by an inulin-enriched diet and Lactobacillus gasseri-enriched microbiome, contributing to the improvement of gut barrier function, energy balance, and glucose levels. Moreover, REG-3 gamma/REG3G Protein modulates the composition of the microbiota in duodenal contents. Lastly, it is produced by nociceptors in response to endotoxins and prevents endotoxic death by targeting the kynurenine pathway in microglia.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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