REG4
Recombinant Human Regenerating Islet-Derived Protein 4 His

Catalog No.	CRR108A	**Quantity:**	2 µg
	CRR108B		10 µg
	CRR108C		1.0 mg

Alternate Names: Regenerating islet-derived protein 4, Reg IV, REG-like protein, Gastrointestinal secretory protein, REG4, GISP, RELP.

Description: REG protein was shown to be stimulated during the regeneration of pancreatic islets. Since then, many Reg-related proteins have been identified in humans and other animals. In human, the four REG family genes, i.e., REG 1 alpha, REG 1 beta, REG-related sequence (RS) and HIP/PAP, have so far been isolated. These proteins share a similar structure and physiological function. Reg protein is a growth factor for pancreatic beta cells and also suggests that the administration of Reg protein could be used as another therapeutic approach for diabetes mellitus.
Reg I was found to be expressed mainly in pancreatic beta and acinoductular cells as well as gastric fundic enterochromaffin-like (ECL) cells. Reg I production in ECL cells is stimulated by gastrin, as well as by the proinflammatory cytokine, cytokine-induced neutrophil chemoattractant (CINC)-2Beta. In patients with chronic hypergastrinemia, Reg production is stimulated, with the increased proliferation of gastric mucosal cells. Patients with *Helicobacter pylori* infection also showed increased Reg production in the gastric mucosa, partly via increased plasma gastrin concentration and partly via increased proinflammatory cytokine production. The serum concentration of the reg-protein was significantly higher in patients with various pancreatic diseases than in normal controls, and was also significantly higher in patients with acute pancreatitis or chronic relapsing pancreatitis than in patients with chronic pancreatitis. Furthermore, the serum PSP/reg-protein concentration was also significantly increased in liver cirrhosis, choledocholithiasis, and various cancers of the digestive system.
Human REG cDNA which encodes a 166-amino acid protein with a 22-amino acid signal peptide. The Recombinant Human REG-4 is manufactured with N-terminal fusion of His Tag. The Recombinant Human REG-IV His-Tagged Fusion Protein is 17.4 kDa protein containing 136 amino acid residues of the Human REG 4 and 12 additional amino acid residues of the His tag.

GeneID: 83998

Source: *E. coli*

Formulation: Filtered (0.4µm) and lyophilized from 0.5 mg/ml in 20 mM Tris, pH 8.0.

Purity: >95% as determined by SDS-PAGE.

Amino Acid Sequence: MKHHHHHHAS HMDIIMRPSC APGWFYHKSN CYGYFRKLRN WSDAELECQS YGNGAHLASI LSLKEASTIA EYISGYQRSQ PIWIGLHDPQ KRQQWQWIDG AMYLYRSWSG KSMGGNKHCA EMSSNNNFLT WSSNECNKRQ HFLCKYRP.

Reconstitution: **Centrifuge vial prior to opening**. Add deionized water to a working concentration approximately 0.5 mg/ml and let the lyophilized pellet dissolve completely. Product is not sterile! Please filter the product by appropriate sterile filter before using it in the cell

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culture.

Applications: Western blotting, ELISA.

Storage & Stability: Store lyophilized protein at -20°C. Aliquot the product after reconstitution. Reconstituted protein can be stored at 4°C for a limited period of time. The lyophilized protein remains stable until the expiration date when stored at -20°C. **Avoid repeated freeze-thaw cycles.**

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