Data Sheet (Cat.No.TMPY-01406)

TargetMol

REG3G Protein, Human, Recombinant (His)

General Information

Synonyms:	UNQ429;PAP-1B;LPPM429;REG-III;regenerating islet-derived 3 γ;PAPIB;REGIII;regenerating islet-derived 3 gamma;PAP1B
Protein Construction:	A DNA sequence encoding the human REG3G (NP_001008388.1) (Met 1-Asp 175) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Glu 27
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q6UW15-1
Molecular Weight:	18 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 97 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Regenerating gene (Reg), first isolated from a regenerating islet cDNA library, encodes a secretory protein with a growth stimulating effect on pancreatic beta cells. Reg and Reg-related genes which were expressed in various organs have been revealed to constitute a multigene family, the Reg family, which consists of four subtypes (types I, II, III, IV) based on the primary structures of the encoded proteins of the genes, which are associated with tissue

repair and have been directly implicated in pancreatic beta-cell regeneration. Reg proteins are expressed in various organs and are involved in cancers and neurodegenerative diseases. They display a typical C-type lectin-like domain but possess additional highly conserved amino acids. Regenerating islet-derived 3 gamma (REG3G), also known as pancreatitis-associated protein 1B (PAP1B), is a member of the secreted Reg superfamily and contains one typical C-type lectin domain. REG3G is expressed weakly in pancreas, strongly in intestinal tract, but not in hyperplastic islets REG3G might be a stress protein involved in the control of bacterial proliferation. It was indicated that REG3G specifically targets Gram-positive bacteria because it binds to their surface peptidoglycan layer, and serves as one of several antimicrobial peptides produced by paneth cells via stimulation of toll-like receptors (TLRs) by pathogen-associated molecular patterns (PAMPs).

Reference

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Castellarin ML,et al.(2007) The identification and sequence analysis of a new Reg3gamma and Reg2 in the Syrian golden hamster. Biochim Biophys Acta. 1769(9-10): 579-85.

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