Data Sheet (Cat.No.TMPY-03693)

TargetMol

REG4 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	regenerating islet-derived family, member 4;GISP;REG-IV;RELP
Protein Construction:	A DNA sequence encoding the human REG4 (Q9BYZ8-1) (Asp23-Pro158) was expressed with the fused Fc region of human IgG1 at the N-terminus. Predicted N terminal: Glu
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9BYZ8-1
Molecular Weight:	59.7 kDa (predicted); 45 kDa (reducing condition, due to glycosylation)

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:	> 90 % 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 islet-derived protein 4, also known as REG-like protein, REG4, GISP and RELP, a member of the regenerating gene family belonging to the calcium (C-type) dependent lectin superfamily, has been found to be involved in malignancy in several different organs including the stomach, colorectum, pancreas and prostate. It is highly expressed in the gastrointestinal tract and markedly up-regulated in colon adenocarcinoma, pancreatic cancer, gastric adenocarcinoma, and inflammatory bowel disease. Expression of the Reg4 in different cell types

has been associated with regeneration, cell growth and cell survival, cell adhesion and resistance to apoptosis. REG4 protein overexpression is associated with an unfavorable response to preoperative chemoradiotherapy and may be used as a predictive biomarker clinically. REG4 may play an important role in the development and progression of colorectal cancer, as well as in intestinal morphogenesis and epithelium restitution.

Reference

Li FY,et al.(2010) RegIV expression showing specificity to gastrointestinal tract and its potential role in diagnosing digestive tract neuroendocrine tumor. J Zhejiang Univ Sci B. 11(4):258-66.

Rafa L,et al.(2010) REG4 acts as a mitogenic, motility and pro-invasive factor for colon cancer cells. Int J Oncol. 36 (3): 689-98.

Hu G,et al.(2010) Purification of a bioactive recombinant human Reg IV expressed in Escherichia coli. Protein Expr Purif. 69(2): 186-90.