Data Sheet (Cat.No.TMPY-02640)

TargetMol

FAM3B Protein, Human, Recombinant (hFc)

General Information

Synonyms:	PANDER;ORF9;PRED44;C21orf11;C21orf76;42056;family with sequence similarity 3, member B
Protein Construction:	A DNA sequence encoding the human FAM3B isoform B (P58499-1) (Met 1-Ser 235) was fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Glu 30
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P58499-1
Molecular Weight:	50 kDa (predicted); 57 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:	> 95 % 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

Pancreatic derived factor, also known as FAM3B, is an islet-specific secreted cytokine specifically expressed at high levels in the islets of Langerhans of the endocrine pancreas. FAM3B protein is present in alpha- and beta-cells of pancreatic islets, insulin-secreting beta-TC3 cells, and glucagon-secreting alpha-TC cells. FAM3B causes apoptosis of beta-cells as assessed by electron microscopy, annexin V fluorescent staining, and flow-cytometric

terminal deoxynucleotidyl transferase-mediated dUTP nick-end labeling assay. FAM3B activated caspase-3 while not affect cytosolic Ca2+levels or nitric oxide levels. Hense, FAM3B may have a role in the process of pancreatic?-cell apoptosis of primary islet and cell lines. FAM3B secretion is regulated by glucose and other insulin secretagogues. This islet-specific secreted cytokine is secreted from both pancreatic alpha- and beta- cells. Glucose stimulates FAM3B secretion dose dependently in beta- cell lines and primary islets but not in alpha-cells. It is likely cosecreted with insulin via the same regulatory mechanisms and structure and conformation is vital for FAM3B secretion.

Reference

Cao X, et al. (2003) Pancreatic-derived factor (FAM3B), a novel islet cytokine, induces apoptosis of insulin-secreting beta-cells. Diabetes. 52(9): 2296-303.
Yang J, et al. (2005) Mechanisms of glucose-induced secretion of pancreatic-derived factor (PANDER or FAM3B) in pancreatic beta-cells. Diabetes. 54(11): 3217-28.
Xu W, et al. (2005) Interferon-gamma-induced regulation of the pancreatic derived cytokine FAM3B in islets and insulin-secreting betaTC3 cells. Mol Cell Endocrinol. 240(1-2): 74-81.