Data Sheet (Cat.No.TMPY-02042)

TargetMol

FAM3D Protein, Human, Recombinant (His)

General Information

Synonyms:	OIT1;family with sequence similarity 3 member D;EF7;UNQ567/PRO1130
Protein Construction:	A DNA sequence encoding the human FAM3D (Q96BQ1-1) (Met 1-Phe 224) was fused with a polyhistidine tag at the C-terminus Predicted N terminal: Tyr 26
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q96BQ1-1
Molecular Weight:	23.4 kDa (predicted); 27 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:	> 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

Family with sequence similarity 3 (FAM3) family is a novel cytokine-like gene family, which has four genes in this family, FAM3A, FAM3B, FAM3C, and FAM3D, each encoding a protein (224-235 amino acids) with a hydrophobic leader sequence. It had indicated that FAM3B/PANDER (pancreatic derived factor) is highly expressed in pancreas, and FAM3A and FAM3C in almost all tissues. FAM3D is abundantly expressed in placenta and weakly expressed in small intestine. Immunohistochemistry showed that FAM3A is expressed prominently in the vascular endothelium,

particularly capillaries. FAM3A and FAM3B protein were both localized to the islets of Langerhans of the endocrine pancreas. Recombinant FAM3B protein has delayed effects on beta-cell function. FAM3C is involved in retinal laminar formation processes in vertebrates. NFATC2, SCP2, CACNA1C, TCRA, POLE, and FAM3D, were associated with narcolepsy. Some of these associations were further supported by gene expression analyses and an association study in essential hypersomnia (EHS), CNS hypersonia similar to narcolepsy.

Reference

Zhu Y,et al.(2002) Cloning, expression, and initial characterization of a novel cytokine-like gene family. Genomics. 80(2): 144-50.

Katahira T,et al.(2010) Secreted factor FAM3C (ILEI) is involved in retinal laminar formation. Biochem Biophys Res Commun. 392(3): 301-6.

Shimada M,et al.(2010) An approach based on a genome-wide association study reveals candidate loci for narcolepsy. Hum Genet. 128(4): 433-41.