Data Sheet (Cat.No.TMPY-03747)

TargetMol

Fucose Mutarotase Protein, Human, Recombinant (His)

General Information

Synonyms:	fucose mutarotase;FucM;C10orf125;FUCU
Protein Construction:	A DNA sequence encoding the human C10orf125 (A2VDF0-1) (Met1-Leu154) was expressed with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Accession:	A2VDF0-1
Molecular Weight:	18.6 kDa (predicted); 19 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:	> 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

FUOM, also known as fucose mutarotase and FucM, belongs to the RbsD / FucU family. FUOM is involved in the interconversion between alpha- and beta-L-fucoses. L-Fucose has two isforms: alpha-L-fucose (29.5%) and beta-L-fucose (7.5%). The beta-form is metabolized through the salvage pathway. GDP-L-fucose formed either by the de novo or salvage pathways is transported into the endoplasmic reticulum, where it serves as a substrate for N- and O-glycosylations by fucosyltransferases. Fucosylated structures expressed on cell surfaces or secreted in

biological fluids are believed to play a critical role in cell-cell adhesion and recognition processes. FUOM mainly exists as homodimer, but also functions as homotetramer, homooctamer, and homodecamer. FUOM's homodimeric form seems catalytically inactive.

Reference

Deloukas P. et al., 2004, Nature. 429 (6990): 375-81.
Galaviz-Hernandez C. et al., 2003, Gene. 309 (2): 81-9.
Gerhard DS. et al., 2004, Genome Res. 14 (10B): 2121-7.