Data Sheet (Cat.No.TMPY-03282)

TargetMol

FUCA1 Protein, Human, Recombinant (His)

General Information

Synonyms:	fucosidase, alpha-L- 1, tissue;fucosidase, α-L- 1, tissue;FUCA
Protein Construction:	A DNA sequence encoding the human FUCA1 (P04066) (Gln32-Lys466) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Gln 32
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P04066
Molecular Weight:	51.9 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

FUCA1 is a lysosomal enzyme involved in the degradation of fucose-containing glycoproteins and glycolipids. Mutations in FUCA1 gene are associated with fucosidosis (FUCA1D), which is an autosomal recessive lysosomal storage disease. Different phenotypes include clinical features such as neurologic deterioration, growth retardation, visceromegaly, and seizures in a severe early form; coarse facial features, angiokeratoma corporis diffusum, spasticity and delayed psychomotor development in a longer surviving form; and an unusual

spondylometaphyseoepiphyseal dysplasia in yet another form.

Reference

Yang M,et al.(1993) A mutation generating a stop codon in the alpha-L-fucosidase gene of a fucosidosis patient. Biochem Biophys Res Commun. 189(2):1063-8.
Fukushima H,et al.(1991) Sequencing and expression of a full-length cDNA for human alpha-L-fucosidase. J Inherit Metab Dis. 13(5):761-5.
Kretz KA,et al.(1990) Characterization of EcoRI mutation in fucosidosis patients: a stop codon in the open reading frame. J Mol Neurosci. 1(3):177-80.

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