

FUT8 Protein, Hamster, Recombinant (aa 68-575, His)

General Information

Synonyms:	FUT8;fucosyltransferase 8 (α (1,6) fucosyltransferase);fucosyltransferase 8 (alpha (1,6) fucosyltransferase)
Protein Construction:	A DNA sequence encoding the hamster FUT8 (G3HCE4) (Arg68-Lys575) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Arg 575
Species:	Hamster
Expression Host:	Baculovirus Insect Cells
Accession:	G3HCE4
Molecular Weight:	60.1 kDa (predicted); 55 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/ μ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing 20 mM Tris, 500 mM NaCl, 3 mM DTT, 10% glycerol, pH 7.0. 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:

Reconstituted with sterile deionized water to 0.13 mg/mL. Reconstitution conditions may vary depending on the lot.

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

Alpha (1,6) fucosyltransferase 8, also known as FUT8, is a member of the glycosyltransferase family. Fucosyltransferases are the enzymes transferring fucose from GDP-Fuc to Gal in an α 1,2-linkage and to GlcNAc in α 1,3-linkage, α 1,4-linkage, or α 1,6-linkage. All fucosyltransferases utilize the same nucleotide sugar, their specificity reside in the recognition of the acceptor and in the type of linkage formed.

Fucosyltransferases share some common structural and catalytic features. On the basis of protein sequence similarities, these enzymes can be classified into four distinct families: (1) the alpha-2-fucosyltransferases, (2) the alpha-3-fucosyltransferases, (3) the mammalian alpha-6-fucosyltransferases, and (4) the bacterial alpha-6-fucosyltransferases. The alpha-3-fucosyltransferases constitute a distinct family as they lack the consensus peptide, but some regions display similarities with the alpha-2 and alpha-6-fucosyltransferases.

Reference

- Breton C, et al. (1998) Conserved structural features in eukaryotic and prokaryotic fucosyltransferases. *Glycobiology*. 8(1): 87-94.
- Oriol R, et al. (1999) Divergent evolution of fucosyltransferase genes from vertebrates, invertebrates, and bacteria. *Glycobiology*. 9(4): 323-34.
- de Vries T, et al. (2001) Fucosyltransferases: structure / function studies. *Glycobiology*. 11(10): 119-128.
- Baboval T, et al. (2002) Comparison of human and mouse Fuc-TX and Fuc-TXI genes, and expression studies in the mouse. *Mamm Genome*. 13(9): 538-41.

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