



α -(1-6) Fucosidase

α -L-Fucoside fucohydrolase

Source

recombinant *E. meningosepticum* in *E. Coli*

Catalog Number

E-F006

Certification of Analysis Lot Number

602.1A

EC

3.2.1.51

Contents

1 vial: α -(1-6) Fucosidase

1 vial: 5x Reaction buffer – 250 mM NaHPO₄, pH 5

Specific Activity >1.5 U/mg

Activity >1 U/ml

Application

•Determination of core fucosylation

Molecular Weight ~50,000 daltons

Specific Activity

One unit of QA-Bio α -(1-6) Fucosidase is defined as the amount of enzyme required to produce 1 μ mole of methylumbelliferone in 1 minute at 37°C, pH 5.0 from 4-methylumbelliferyl- α -L-fucoside.

Formulation

The enzyme is provided as a sterile-filtered solution in 20 mM Tris HCl pH 7.5 and 25 mM NaCl.

Alpha(1-6) Fucosidase



Specificity

Alpha(1-6) Fucosidase is specific for cleaving the alpha(1-6) core fucose from reducing terminally labeled oligosaccharides. To date, the fluorescent labels ANTS and ANDSA(aminonaphthalene tri and disulfonic acid) and 2-AA(aminobenzoic acid) have been demonstrated to function with the fucosidase. There is no cleavage of unlabeled oligosaccharides whether or not they are free or glycopeptides. Oligosaccharides such as fucosylated trimannosylchitobiose can be cleaved to completion using the recommended reaction conditions. However, longer oligosaccharides such as fucosylated biantennary oligosaccharides are only partially cleaved.

The fucosidase will also cleave non-reducing terminal alpha(1-3) and alpha(1-4) fucose, but not alpha(1-2) fucose, provided the fucose is not branching. No labeling is required. These substrates do not apparently occur in nature.

Cleavage of labeled oligosaccharides by the fucosidase is diagnostic of alpha 1-6 core fucosylation.

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Specifications - Protocol

Stability

Stable at least 12 months when stored properly. Several days exposure to ambient temperatures will not reduce activity.

Storage

Store enzyme at 4°C. Do not freeze.

Purity

QA-Bio α -(1-6) Fucosidase is tested for contaminating protease as follows: 10 μ g of denatured BSA is incubated at 37°C for 24 hours with 2 μ l of enzyme. SDS-PAGE analysis of the treated BSA shows no evidence of degradation.

Each lot is also tested for contaminating activities by incubating the enzymes with the appropriate substrates for 24 hours; the detection limit is 5 μ U/ml (IUB). A passing lot will have no detectable activity.

Directions for use

1. Add up to 1 nmol of oligosaccharide to tube.
2. Add de-ionized water to a total of 15 μ l.
3. Add 4 μ l 5x Reaction Buffer 5.0.
4. Add 1 μ l α -(1-6) Fucosidase.
5. Incubate overnight at 37°C.

Warranties and liabilities

QA-Bio, LLC warrants that the above product conforms to the specifications described herein. Should the product fail for reasons other than through misuse QA-Bio, LLC will, at its option, replace free of charge or refund the purchase price. This warranty is exclusive and QA-Bio, LLC makes no other warrants, expressed or implied, including any implied conditions or warranties of merchantability or fitness for any particular purpose.

QA-Bio, LLC shall not be liable for any incidental, consequential or contingent damages.

This product is intended for *in vitro* research only.

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