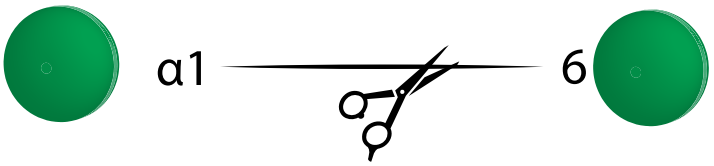

α-(1-6) Core Mannosidase

α-D-Mannosidase Mannohydrolase

Source
recombinant from *Xanthomonas manihotis* in *E. Coli*

Catalog Number

E-AM02	60 µl
E-AM02-20	20 µl
E-AM02-200	200 µl

EC
3.2.1.34

Recommended Reagents
included with E-AM02:
1 vial: 5x Reaction buffer – 250 mM $NaHPO_4$, pH 5

Activity ≥ 1 U/ml
Specific Activity ≥ 1 U/mg

Application
- Analysis of mannose linkages
- Removal of α-(1-6) mannose resistant to other mannosidase enzymes

Molecular Weight ~52,000 daltons

Storage
Store enzyme at 4°C. Do not freeze.

Specific Activity
One unit of QA-Bio α-(1-6) Core Mannosidase is defined as the amount of enzyme required to produce 2 µmoles of p-nitrophenol (pNP) in 1 minute at 37°C, pH 5.0 from α-(1-6) mannobiose.

Specificity
Cleaves unbranched non-reducing terminal mannose, α(1-6) linked to the beta-linked core mannose of the conserved mannosylchitobiose core of N-linked oligosaccharides. The presence of fucose linked to the core N-acetylglucosamine has no effect on cleavage. The enzyme may inhibit other mannosidases if a noncleavable α(1-6) mannose is present on the substrate. It should therefore always be added subsequent to digestion by other mannosidases.

Formulation
The enzyme is provided as a sterile-filtered solution in 50 mM Sodium phosphate 0.1 m*M* $ZnCl_2$ pH 7.5.

Stability
Stable at least 24 months when stored properly. Several days exposure to ambient temperatures will not reduce activity.

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

The production host strain has been extensively tested and does not produce any detectable glycosidases.

α-(1-6)-Mannosidase
Specifications - Protocol

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Directions for use

1. Add up to 1 nmol of oligosaccharide to tube.

2. Add de-ionized water to a total of 15 µl.

3. Add 4 µl 5x Reaction Buffer 5.0.

4. Add 1 µl α-(1-6) Core Mannosidase.

5. Incubate at 37°C for 10 minutes.

Progress may be monitored by SDS-PAGE if the size differential between native and de-glycosylated protein is sufficient for detection.

Warranties and liabilities

QA-Bio, Inc warrants that the above product conforms to the specifications described herein. Should the product fail for reasons other than through misuse QA-Bio, Inc. will, at its option, replace free of charge or refund the purchase price. This warranty is exclusive and QA-Bio, Inc. makes no other warrants, expressed or implied, including any implied conditions or warranties of merchantability or fitness for any particular purpose. QA-Bio, Inc. shall not be liable for any incidental, consequential or contingent damages.

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

revised on January 16, 2025

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