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Product Information & Manual

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Alpha-1,3-mannosidase

Cat no. LDG0026RG

Product Overview

Description

Alpha-1,3 Mannosidase is a highly specific exoglycosidase that catalyzes the hydrolysis of α-1-3 linked D-Mannopyranosyl residues from oligosaccharides.

Source

Escherichia coli

Activity

One unit is defined as the amount of α-1,3 Mannosidase required to catalyze the release of 1 nanomole 4-methylumbelliferone (4MU) from 4-methylumbelliferyl α-D-mannopyranoside (4MU-Man) in 30 min at 37°C in 50 µL reaction buffer (50 mM Tris-HCl, 100 mM NaCl, pH 7.0, containing 0.2 mM $ZnSO_4$ and 1 mg/ mL BSA).

Storage buffer

The enzyme is supplied in 20 mM Tris-HCl, 100 mM NaCl, pH 7.5

Storage and Stability

The product is stable for long-term storage at -20°C under sterile conditions. Avoid repeated freeze-thaw cycles.

Procedure

1. Prepare a 50 µL reaction mix containing reaction buffer (50 mM Tris-HCl, 100 mM NaCl, pH 7.0), 0.2 mM $ZnSO_4$, 1 mg/ mL BSA, and 3 mM 4MU-Man.
2. Add 1 µL of α-1,3 Mannosidase to the reaction mixture and incubate at 37°C for 30 min, protected from light.
3. Stop the reaction by adding 150 µL of 0.2 M Na_2CO_3.
4. Fluorescence intensity at ex/em = 360/460 nm is measured on a plate reader and converted to nanomole of 4MU via a standard curve.

Appendix: Based on the unit definition, 1 U = 1 nanomole of 4MU. The fluorescence intensity of 0, 1, 2, 3, and 4 nanomole of 4MU were measured at ex/em = 360/460 nm as a standard curve.

Important notes

1. Please fine-tune the input sample volume to find the optimal condition for your assay.
2. Once optimize for the cleavage condition, the cleavage reactions can be scaled up to cleave a large amount of the target fusion protein.

Disclaimer

This product is for research use only and is not intended for diagnostic use.

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