

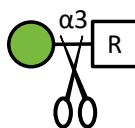
α1,3 Mannosidase contents

Catalog #	Description	Size	M. W.	Purity	pH	Storage
GE1001	α1,3 Mannosidase	1,000 units	105,488	> 95%	7.0 optimal	-80°C, up to 6 months
BA0601	10X Reaction Buffer 2	1 mL			7.0	4 to 25°C
BA0602	50X ZnSO ₄	0.25 mL (10 mM)				4°C
BA0603	50X BSA	0.25 mL (50 mg/mL)				-20°C

This product is for research use only and not for resale or for any use in the manufacture of a therapeutic or for any diagnostic purpose

Product description: This product is a recombinant α1,3 mannosidase (glycosyl hydrolase family GH38, EC #3.2.1.24) cloned from *Streptococcus pyogenes* and expressed in *Escherichia coli* with an N-terminal 8xHis tag. The 8xHis tag may be removed by digestion with FasTEV™ (Cat #GE0501), a TEV protease with enhanced stability and catalytic activity.

This product catalyzes the hydrolysis of terminal α1,3-linked mannose (Man) from oligosaccharides and glycoprotein substrates.



This product does not contain any detectable activities of proteases or other glycosidases.

Unit definition: One unit is defined as the amount of α1,3 Mannosidase required to catalyze the release of 1 nmole 4-methylumbelliferone (4MU) from 4-methylumbelliferyl α-D-mannopyranoside (4MU-Man) in 30 min at 37°C in 50 μL 1X Reaction Buffer 2 (50 mM Bis-Tris, 100mM NaCl, pH 7.0), plus 0.2 mM ZnSO₄ and 1 mg/mL BSA.

Form and Storage: The product is supplied as a 10,000 units/mL (Cat #GE1001) solution in enzyme storage buffer (20 mM Tris-HCl, 100 mM NaCl, pH 7.5). Upon arrival, store at 4°C for up to 7 days or -80°C for up to 6 months. Aliquoting is recommended to avoid repeated freeze-thaw cycles.

Activity assay: Prepare a 50 μL reaction mix containing 1X Reaction Buffer 2, 1X ZnSO₄, 1X BSA, and 3 mM 4MU-Man. Add 0.1-1 μL (1-10 units) of α1,3 Mannosidase to the reaction mix and incubate at 37°C for 30 min, protected from light. Stop the reaction by adding 150 μL 0.2 M Na₂CO₃. Fluorescence intensity at ex/em = 360/460 nm is measured on a plate reader and converted to nanomole of 4MU via a standard curve.

Reference: Suits MD, et al. PLoS One. 2010 Feb 3;5(2):e9006. PMID: 20140249.