

Active Recombinant *Canavalia ensiformis* α 1-2,3,6 Mannosidase

Cat. No. Mannosidase-04C **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Active Recombinant Jack Bean (<i>Canavalia ensiformis</i>) α 1-2,3,6 Mannosidase was expressed in Yeast (<i>Pichia pastoris</i>).
Species	<i>Canavalia ensiformis</i>
Source	Yeast
Description	α 1-2,3,6 Mannosidase is a broad specificity exoglycosidase that catalyzes the hydrolysis of terminal, non-reducing α 1-2, α 1-3 and α 1-6 linked mannose residues from oligosaccharides.
Molecular Mass	110 kDa
Purity	$\geq 95\%$ purity, as determined by SDS-PAGE and intact ESI-MS
Notes	1. α1-2,3,6 mannosidase is a glycosylated protein. The theoretical molecular weight is 110 kDa, and it contains two subunits of 66 kDa and 44 kDa, respectively. 2. The optimum pH value of α1-2,3,6 mannosidase is 4.5. Adding 2 mM Zn^{2+} into the reaction system can enhance the activity of the enzyme. 3. In order to completely remove all mannose residues linked by α at the non-reducing end, it may be necessary to increase the enzyme concentration and incubate overnight (18 hours). 4. In order to completely remove α1-6 mannose residues from complex substrates, it may be necessary to use α1-2,3,6 mannosidase and α1-6 mannosidase for enzyme

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

digestion. 5. If a larger reaction volume is needed, the reaction system can be enlarged in proportion. 6. The amount of exonuclease is different with different substrates. In the reaction system of 10-25 μ L, when 1 μ g glycoprotein or 100 nM oligosaccharide is treated within 1 hour, the initial amount of enzyme ranges from 1-2 μ L. If the enzyme digestion is not complete, overnight reaction is needed.

Storage Optimal activity and stability for up to 24 months

Storage Buffer 20 mM Tris-HCl, 50 mM NaCl, pH 7.5 at 25 centigrade.

Unit definition One unit refers to the amount of enzyme needed to hydrolyze more than 95% of terminal mannose in 1 nmol man (α 1,3)-man (β 1,4)-glcnac-7-amino-4-methyl-coumarin (AMC) in 10 μ L total reaction system at 37 centigrade within one hour. Detection condition of unit activity: In 10 μ L reaction system, α 1-2,3,6 mannosidase diluted twice was incubated with 1 nmol AMC labeled substrate in 1X GlycoBuffer 4 and 1 $\times$ zinc. The reaction mixture was incubated at 37 centigrade for 1 hour. The separation of reaction products was observed by TLC.

Heat Inactivation 95 centigrade for 10 minutes

Reaction Buffer 1 $\times$ GlycoBuffer 4, Supplement with 1 $\times$ Zinc, Incubate at 37 centigrade. 1 $\times$ GlycoBuffer 4: 50 mM sodium acetate (pH 4.5 at 25 centigrade)

GENE INFORMATION

Official Symbol α 1-2,3,6 Mannosidase

Synonyms α 1-2,3,6 Mannosidase

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