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[full product listing at www.prozomix.com/products/listing]

Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0060
LOT:	2008-0060
Activity:	β-Mannosidase
Synonyms:	Mannanase; mannase; β-D-mannosidase; β-mannoside mannohydrolase; exo-β-D-mannanase; β-D-mannoside mannohydrolase
Nomenclature:	CAZY [GH5, glycoside hydrolase family 5, member of clan GH-A], *Cj*Man5D, CJA_0244, man5D
Source organism:	*Cellvibrio japonicus NCIMB 10462*
Enzyme Commission No.:	3.2.1.25
Activity:	-
Specific activity:	-
Purity:	> 95 % as judged by SDS-PAGE
Form and storage:	Supplied in 3.2 M ammonium sulphate, store at 4°C (shipped at room temperature)
pH optimum:	-
Temperature optimum:	-
[Protein]:	10 mg/mL
Sequence length:	440 amino acids (view sequence)
Accession No.:	B3PGI9, ACE83583.1, YP_001980768.1
Molecular weight:	48581.4 Da (theoretical) ~ 45000 Da (observed by SDS-PAGE) - (observed by mass spectrometry)
Biological function:	Hydrolysis of terminal, non-reducing β-D-mannose residues in β-D-mannosides
Potential application(s):	Biomass conversion, carbohydrate research, fundamental research
Comments:	This enzyme is a homologue of *Cm*Man5A (Man5A from *Cellvibrio mixtus*) that has been shown to be an exo-acting mannanase that releases mannose from the non-reducing end of polymeric substrates (see Ref. 2). *Cj*Man5D is thought to be located on the

NOTE: this product has been produced and is awaiting assay. It is thus currently available for purchase by the mg only. If you have a query, please contact us (technical@prozomix.com)

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host bacterial cell's outer membrane, and is implicated in the hydrolysis of manno-oligosaccharides (see Ref. 3).

Usage: Agitate bottle sufficiently to fully homogenise enzyme precipitate before use

Assay: -

Primary sequence:

MAPEKMPSPDTSTAKSDTQGAEFVRVQGRQFVLDGKAYYPVGVNFWFGAYLGAEGEQGDRTRLLKELDLLHSLGV
NNLRVLAVSEDSELVRAVRPAIVNAKGEFNESLLQGLDFLLAEMAKRNMTAVLYLNNFWQWSGGMSQYVAWHKGT
PVLDPDVTGEWNAFMQNSAEFYRIADAQVRYHQVIKTLTGRVNSITGIAYHQDPTIMSWQLANEPRPGSDADGRP
NVEVYIQWIKTTARLLHQLAPQQLVSTGSEGVMGSIGDPAVYVAAHELPEVDYLTFHMWAKNWGWFDAKNPAATF
TGSLEKAAAYIDTHIDIANRLGKPTVLEEFGLDRDGGAFAADSGTQYRDIYYQTVFNQLHERAVAGDAIAGYNIW
AWGGYGRSQRADFIWQPGDDFMGDPPQEPQGLNSVLASDASTLAIIKQSTADFASLAVTEKTALP

Literature:

1. DeBoy *et al.* (2008) *J. Bacteriol.* **190**, 5455-5463

2. Fernando *et al.* (2004) *J. Biol. Chem.* **279**, 25517-25526

3. Cartmell *et al.* (2008) *J. Biol. Chem.* **238**, 34403-34413