

## Recombinant Enzyme Product Specification Sheet

<b>Cat. No.:</b>	PRO-E0213	<a href="#">add this product to cart</a>
<b>LOT:</b>	2008-0213	<a href="#">view other <math>\beta</math>-xylosidases</a>
<b>Activity:</b>	$\beta$ -Xylosidase	
<b>Synonyms:</b>	Xylan 1,4- $\beta$ -xylosidase; xylobiase; exo-1,4- $\beta$ -xylosidase; $\beta$ -D-xylopyranosidase; exo-1,4-xylosidase; exo-1,4- $\beta$ -D-xylosidase; 1,4- $\beta$ -D-xylan xylohydrolase; 4- $\beta$ -D-xylan xylohydrolase; xylan 1,4-beta-xylosidase; exo-1,4-beta-xylosidase; beta-D-xylopyranosidase; exo-1,4-beta-D-xylosidase; 1,4-beta-D-xylan xylohydrolase; 4-beta-D-xylan xylohydrolase	
<b>Nomenclature:</b>	CAZy [GH43, glycoside hydrolase family 43, member of clan GH-F]	
<b>Source organism:</b>	<i>Lactobacillus brevis</i> ATCC 367	
<b>Enzyme Commission No.:</b>	3.2.1.37	
<b>Activity:</b>	210.83 U/mL	} (35°C; pH 6.0; 5 mM oNP- $\beta$ -D-xylopyranoside)
<b>Specific activity:</b>	26.76 U/mg	
<b>Purity:</b>	> 95 % as judged by SDS-PAGE	
<b>Form and storage:</b>	Supplied in 3.2 M ammonium sulphate, store at 4°C (shipped at room temperature)	
<b>pH optimum:</b>	6.0	
<b>Temperature optimum:</b>	~40°C	
<b>[Protein]:</b>	7.88 mg/mL	
<b>Sequence length:</b>	540 amino acids ( <a href="#">view sequence</a> )	
<b>Accession No.:</b>	<a href="#">Q03N89</a> , <a href="#">YP_796364</a> , <a href="#">ABJ65333</a>	
<b>Molecular weight:</b>	63608.3 Da	(theoretical)
	~ 65000 Da	(observed by SDS-PAGE)
	-	(observed by mass spectrometry)
<b>Biological function:</b>	Catalyses the hydrolysis of (1→4)- $\beta$ -D-xylans, to remove successive D-xylose residues from the non-reducing termini	
<b>Potential application(s):</b>	<a href="#">Biomass conversion</a> , <a href="#">carbohydrate research</a>	
<b>Comments:</b>	This enzyme also hydrolyses xylobiose and xylooligosaccharides	
<b>Usage:</b>	Agitate vial sufficiently to fully homogenise enzyme precipitate before use	

**Assay:**

One unit is defined as the amount of enzyme required to release 1  $\mu\text{mol}$  of oNP per minute from oNP- $\beta$ -D-xylopyranoside (5 mM) in 20 mM sodium phosphate buffer, pH 6.0, at 35°C, and using an extinction coefficient of 18000  $\text{M}^{-1} \text{cm}^{-1}$

**Primary sequence:**

MKIQNPLVLPGFNADPSMIRVGDYIYIANSTFEWFFGVRLHESKDLVHWNLLPSPLSTTTLLDMKGNPASGGIWAP  
DLSYADGKFWLIYTDVKITEGPFKDMTNYLTATDIRGPWTDPIAVNGVGFDAFLFDENGRKYLQQTWDHREY  
HHPFNIGITLTFEFDATMQLKPEATARNIYNGTDVKLVEGPHLYQINGYYLFAAEGGTVFTHQEVVARSKTLDELS  
FESEPDGPFITNMDTPDFYLQKQGHGALTSTPSGEWYYASLVS RPWNHTNESSHDPGWSTLGRETSIQKVEWDD  
AGWPRVVGHHGGQVEVDAPKDAIETTAPKDHSDHDFDQPTLDLNWNTRLRQPFTAQMGSVGNELKLIQQTMSS  
NFDVSLIARRWQAFNFDAAETKVKFDPFTYQQMAGLANIYNDKHYSWIFITWDEKKGHVIEVAQNNDNNYTSYDKD  
DAIKIPDGTDYVWFRTKVRKQSYTYEYSFDGQNWETVPVELDAAILSDDYVLQNYGGFFTGAFVGLMAADYAGYK  
RVATFDYFDYQELPD

**Literature:**

1. *Makarova et al. (2006) Proc. Natl. Acad. Sci. U.S.A. 103, 15611-15616*