

Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0413	add this product to cart
LOT:	2009-0413	view all branching enzymes
Activity:	1,4- α -Glucan branching enzyme	
Synonyms:	Branching enzyme; amylo-(1,4 \rightarrow 1,6)-transglycosylase; Q-enzyme; α -glucan-branching glycosyltransferase; amylose isomerase; enzymatic branching factor; branching glycosyltransferase; enzyme Q; glucosan transglycosylase; glycogen branching enzyme; plant branching enzyme; α -1,4-glucan: α -1,4-glucan-6-glycosyltransferase; starch branching enzyme; 1,4- α -D-glucan:1,4- α -D-glucan 6- α -D-(1,4- α -D-glucano)-transferase	
Nomenclature:	CAZy [GH13 subf8, glycoside hydrolase family 13 subfamily 8, member of clan GH-H], BF2338, GlgB	
Source organism:	<i>Bacteroides fragilis</i> NCTC 9343	
Enzyme Commission No.:	2.4.1.18	
Activity:	95.25 U/mL	} (37°C; pH 7.0; 3.3 mg/mL starch)
Specific activity:	18.23 U/mg	
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:	7.0	
Temperature optimum:	\geq 37°C	
[Protein]:	5.22 mg/mL	
Sequence length:	670 amino acids (view sequence)	
Accession No.:	Q5LCX9 , YP_211960.1 , CAH08034.1 , BFRA272559:BF2338-MON	
Molecular weight:	81104.6 Da	(theoretical)
	-	(observed by SDS-PAGE)
	-	(observed by mass spectrometry)
Biological function:	May be involved in glycogen biosynthesis.	
Potential application(s):	Carbohydrate research , fundamental research	
Comments:	This is a cytoplasmic enzyme	

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

Assay: One unit is defined as the amount of enzyme required to cause a fall of 1.0 absorbance units, where the reaction mixture comprises 3.33 mg/mL starch (Sigma; S-9765; boiled for 5 min prior to use to fully solubilise) in 41.7 mM sodium phosphate buffer, pH 7.0, containing 0.69 mg/mL BSA and 173.6 mM sodium chloride, and where 0.075 mL of the reaction mixture (boiled for 5 min to inactivate the enzyme) is mixed with 1.0 mL iodine reagent prior to reading at 660 nm

Primary sequence:

MEKTLNLIKNDPWLEPYKDAIVGRFEHAMDKKAELTNGGKSTLSDFASGYLYFGLHRTDKGWI FREWAPNASHIY
MVGTFNSWEEKPAYKLRKLNKSWEIKLPIDTIQHGDLYKLHVYWEGGQGERIPAWANRVVQDDNTKIFSAQVWA
PEKPFKFKKKTFKPSTDLLIYECHIGMAQQEKKVGTYNFREFKILPRIAKEGYNCIQIMAIQEHPYYGSFGYHV
SSFFAASSRFGTPEELKQLIDTAHGLGIIVMDIVHSHAVKNEVEGLGNFAGDPNQYFYPGGRREHPAWDSLCFD
YGKNEVMHFLLSNCKYWLEEYHFDGFRFDGVTSMLYYSHGLGEAFCNYGDYFNGHQDDNAICYLTLANELIHEVN
PKAITIAEEVSGMPGLAAKVEDGGYGFDIRMAMNIPDYWIKTIKEKIDEDWKPSMFEVVTNRRQDEKTI SYAES
HDQALVGDKTIIIFRLIDADMYWHMQGDENYIVHRGVALHKMIRLLTASTINGGYLNFMGNEFGHPEWIDFPREG
NGWSCKYARRQWDLVDNKNLTYHYLGDFDADMLKVIKSVKNIQQTPVQE IWHNDGDQVLAYQRKDLVVFVFNFNPS
QSFTDYGFLVTPGTYEVLNTDNI IYGGNGLSDDSVKHFTLPDPLYKKEKKEWLKLYIPARTAMVLRRTK

Literature: 1. [Cerdeno-Tarraga et al. \(2005\) Science 307, 1463-1465](#)