

Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0411	add this product to cart
LOT:	2009-0411	
Activity:	Trehalose-6-phosphate hydrolase	view other trehalose-6-phosphate hydrolases
Synonyms:	α,α-Trehalose-6-phosphate phosphoglucohydrolase; α,α-phosphotrehalase; phosphotrehalase; alpha,alpha-trehalose-6-phosphate phosphoglucohydrolase; alpha,alpha-phosphotrehalase	
Nomenclature:	CAZy [GH13 subf29, glycoside hydrolase family 13 subfamily 29, member of clan GH-H], treC, olgH, b4239, JW4198	
Source organism:	<i>Escherichia coli</i> str. K-12 substr. W3110	
Enzyme Commission No.:	3.2.1.93	
Activity:	3472.9 U/mL	} (37°C; pH 6.0; 5 mM pNP-α-glucoside)
Specific activity:	252.39 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:	~ 6.0	
Temperature optimum:	≥ 37°C	
[Protein]:	13.76 mg/mL	
Sequence length:	551 amino acids (view sequence)	
Accession No.:	P28904 , AP_004737.1 , NP_418660.1	
Molecular weight:	67657.8 Da	(theoretical)
	~ 70000 Da	(observed by SDS-PAGE)
	-	(observed by mass spectrometry)
Biological function:	α,α-Trehalose 6-phosphate + H ₂ O <=> D-glucose + D-glucose 6-phosphate	
Potential application(s):	Carbohydrate research , fundamental research	
Comments:	-	
Usage:	Agitate vial sufficiently to fully homogenise enzyme precipitate before use	

Assay: One unit is defined as the amount of enzyme required to release 1 μmol of *p*NP per minute from *p*NP- α -D-glucopyranoside (5 mM) in 50 mM sodium acetate buffer, pH 6.0, containing 1 mg/mL BSA and 1 M sodium chloride, at 37°C, and using an extinction coefficient of 18000 $\text{M}^{-1} \text{cm}^{-1}$. The enzyme should be diluted in 1 mg/mL BSA

Primary sequence:

MTHLPHWWQNGVIYQIYPKSFQD TTGSGTGDLRGVIQHLDYLHKLGVDAIWLTPFYVSPQVDNGYDVANYTAIDP
TYGTLDDFDELVTQAKSRGIRIILDMVFNHTSTQHAWFREALNKESPYRQFYIWRDGEPE TPPNNWRSKFGGSAW
RWAHAESEQYYLHLFAPEQADLNWENPAVRAELKKVCEFWADRGV DGLRLDVVNLI SKDPRFPEDLDGDGRRFYTD
GPRAHEFLHEMNRDVFTPRGLMTV GEMSSSTLEHCQRYAALTGSELSMTFNFHHLKVDY PGGEKWT LAKPDFVAL
KTLFRHWQQGMHNVAWNALFWCNHDQPRIVSRFGDEGEYRVPAAKMLAMVLHGMQGTPYIYQGEEIGMTNPHFTR
ITDYRDVESLNMFAELRNDGRDADELLAILASKSRDNSRTPMQWSNGDNAGFTAGEPWIGLDNYQQINVEAALA
DDSSVFYTYQKLI ALRKQEA ILTWGNYQDLLPNSPVLWCYRREWKGQ TLLVIANLSREIQPWQAGQMRGNWQLVM
HNYEEASPOPCAMNLRPF EAVWWLQK

Literature: 1. Hayashi *et al.* (2006) *Mol. Syst. Biol.* **2**, 1-5