

## Recombinant Enzyme Product Specification Sheet

<b>Cat. No.:</b>	PRO-E0402
<b>LOT:</b>	2009-0402
<b>Activity:</b>	Glucan 1,4- $\alpha$ -maltohydrolase
<b>Synonyms:</b>	Maltogenic $\alpha$ -amylase; 1,4- $\alpha$ -D-glucan $\alpha$ -maltohydrolase; 4- $\alpha$ -D-glucan $\alpha$ -maltohydrolase
<b>Nomenclature:</b>	<a href="#">CAZy [GH13 subf20, glycoside hydrolase family 13 subfamily 20, member of clan GH-H]</a> , YvdF, BSU34620
<b>Source organism:</b>	<i>Bacillus subtilis</i> subsp. <i>subtilis</i> str. 168
<b>Enzyme Commission No.:</b>	<a href="#">3.2.1.133</a>
<b>Activity:</b>	-
<b>Specific activity:</b>	-
<b>Purity:</b>	-
<b>Form and storage:</b>	-
<b>pH optimum:</b>	-
<b>Temperature optimum:</b>	-
<b>[Protein]:</b>	-
<b>Sequence length:</b>	589 amino acids ( <a href="#">view sequence</a> )
<b>Accession No.:</b>	<a href="#">O06988</a> , <a href="#">NP_391342.1</a> , <a href="#">CAB08035.1</a> , <a href="#">BSUB224308:BSU3459-MON</a>
<b>Molecular weight:</b>	72673.8 Da (theoretical)
	- (observed by SDS-PAGE)
	- (observed by mass spectrometry)
<b>Biological function:</b>	Hydrolysis of (1 $\rightarrow$ 4)- $\alpha$ -D-glucosidic linkages in polysaccharides so as to remove successive $\alpha$ -maltose residues from the non-reducing ends of the chains
<b>Potential application(s):</b>	<a href="#">Carbohydrate research</a> , <a href="#">fundamental research</a>
<b>Comments:</b>	98 % identical to the dimeric intracellular maltogenic amylase from <i>Bacillus subtilis</i> SUH4-2 (Ref. 1)
<b>Usage:</b>	-
<b>Assay:</b>	-

**NOTE:** this product is currently under development. If you wish to prioritise the production of this enzyme/protein, please follow [this link](#)

**Primary sequence:**

MMEYAAIHHQPFSTDAISYDGRITVHIKIRTKKGDADHIRFIWGDPEYNDGKWSANEQPMRKIAATEMHDYWFAE  
VVPPFRRLQYAFVVTDDHEDIFFGSSGVCOPYNEKTLETIHYYFKFPFVHEADTFQAPEWVKSTVWYQIFPERFAN  
GREDLSPKNALPWGSKDPDVNDFFGGDLQGIQVLDKLDYLEDLGVNGIYLTPIFSAPSNHKYDTLDYFSDPHFGDP  
ELFRTLVSQHLHQRGMRIMLDVAVFNHIGSASPQWQDVVKNQDQSRKDFWFIHSPVTDNDYDRFAFTADMPKLNT  
ANPEVQKYLDDIALYWIREFDIDGWRLDVANEVDHVFVKTFRQAVSTEKPDVYILGEIWHSAEPWLRGDEFHAAM  
NYPFTEPMIEYFADQTIASARMAHRVNAHLMNGMKQANEVMEFNLLDSDTKRLLTRCRNDEKKARALLAFMFAQT  
GSPCIYYGTEIIGLNGENDPLCRKCMVWEKEKQNDMLQFMKRLIALRKQENTLLTEGHLEWNLDDKNDFISFSR  
TLDEKILIIYFFNQGNVQHVSLRELNIDRNKKICDAWTEQPLQHHDVIAVQPGFELIISAAPV

**Literature:**

1. [Cho et al. \(2000\) \*Biochim. Biophys. Acta\* \*\*1478\*\*, 333-340](#)