

## Native Microorganism $\alpha$ -Glucosidase (MALTASE)

Cat. No. DIA-194

Lot. No. (See product label)

### Introduction

<b>Description</b>	Glycoside hydrolases (also called glycosidases or glycosyl hydrolases) assist in the hydrolysis of glycosidic bonds in complex sugars. They are extremely common enzymes with roles in nature including degradation of biomass such as cellulose and hemicellulose, in anti-bacterial defense strategies (e.g., lysozyme), in pathogenesis mechanisms (e.g., viral neuraminidases) and in normal cellular function (e.g., trimming mannosidases involved in N-linked glycoprotein biosynthesis). Together with glycosyltransferases, glycosidases form the major catalytic machinery for the synthesis and breakage of glycosidic bonds.
<b>Applications</b>	This enzyme is useful for structural investigations of carbohydrates and for the enzymatic determination of $\alpha$ -amylase when coupled with hexokinase and G-6-P dehydrogenase in clinical analysis.
<b>Synonyms</b>	Alpha-glucosidase; EC 3.2.1.20; maltase; glucoinvertase; glucosidosucrase; maltase-glucoamylase; alpha-glucopyranosidase; glucosidoinvertase; alpha-D-glucosidase; alpha-glucoside hydrolase; alpha-1,4-glucosidase; alpha-D-glucoside glucohydrolase; glycosidases; glycosyl hydrolases; $\alpha$ -Glucosidase

### Product Information

<b>Source</b>	Microorganism
<b>Appearance</b>	White amorphous powder, lyophilized
<b>Form</b>	Freeze dried powder
<b>EC Number</b>	EC 3.2.1.20
<b>CAS No.</b>	9001-42-7
<b>Molecular Weight</b>	approx. 65 kDa (Gel-filtration and SDS-PAGE)
<b>Activity</b>	Gradell 20U/mg-solid or more
<b>Contaminants</b>	$\alpha$ -amylase < $1.0 \times 10^{-5}\%$
<b>Isoelectric point</b>	5.2
<b>pH Stability</b>	pH 5.0-9.0
<b>Optimum pH</b>	6.0-7.0
<b>Thermal stability</b>	below 60°C (pH 7.0, 15min)
<b>Optimum temperature</b>	60°C
<b>Michaelis Constant</b>	$6.3 \times 10^{-4}\text{M}$ (p-Nitrophenyl- $\alpha$ -D-glucopyranoside)
<b>Inhibitors</b>	Ag <sup>+</sup> , Hg <sup>++</sup> , PCMB, MIA
<b>Stabilizers</b>	Bovine serum albumin (BSA)

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### ***Storage and Shipping Information***

**Stability** Stable at -20°C for at least one year