

Product Information

α -Glucosidase from *Saccharomyces cerevisiae*, recombinant overexpressed in *S. cerevisiae*

Product Number **G 0660**

Storage Temperature 2–8 °C

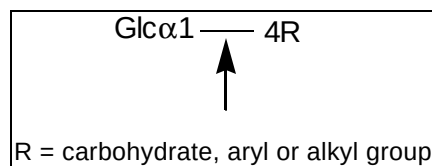
CAS[#] 9001-42-7

EC 3.2.1.20

Synonyms: α -D-Glucoside glucohydrolase, Maltase,
 α -D-Glucosidase

Product Description

This enzyme is an exoglycosidase and hydrolyzes terminal, non-reducing α -1 $\rightarrow$ 4, α -1 $\rightarrow$ 3, and α -1 $\rightarrow$ 2 linked D-glucose residues from oligosaccharides, with preference for the α -1 $\rightarrow$ 4 linkage. The cleavage of α -1 $\rightarrow$ 6 linked glucose also takes place, but at a much slower rate. Relatively small substrates, such as maltose and sucrose, are cleaved more rapidly than larger substrates such as maltoheptaose or starch. Substrates containing β -glucosidic linkages such as raffinose or cellobiose are not cleaved.



The enzyme is useful for the determination of pancreatic α -amylase and for exolytic cleavage of polysaccharides.¹

Molecular weight: 68.5 kDa

Isoelectric point (pI): 5.9

pH optima: 6.0 with maltose as substrate (K_M = 80 mM)
6.5 with p-nitrophenyl α -D-glucopyranoside as substrate
(K_M = 0.2 mM).

Inhibitors: histidine
amines (Tris)
metal ions (Hg^{2+} , Cu^{2+} , Ag^+ , Pb^{2+} , Fe^{2+} , and Zn^{2+})
iodoacetate
4-chloromercuribenzoate.

The enzyme is supplied as a lyophilized powder containing potassium phosphate buffer salts, pH 7.15, and stabilized with ~70% lactose.

Specific activity: ≥ 125 units/mg protein (Biuret)

Unit Definition: One unit will release 1 μ mole of D-glucose from p-nitrophenyl α -D-glucoside per minute at pH 6.8 at 37 °C.

Each lot of enzyme is tested for the following contaminating activities:

β -glucosidase (<0.01%)

α -galactosidase (<0.01%)

β -galactosidase (<0.01%)

6-phosphoglycerate dehydrogenase (<0.02%)

phosphoglycerate isomerase (<0.1%)

hexokinase (<1%).

Protease activity was also not detected.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

It is recommended to store the lyophilized enzyme at 2–8 °C. The product, as supplied, is stable for 4 years. The activity of the lyophilized enzyme is stable at temperatures up to 40 °C.

Reconstituted solutions are stable for several weeks at 2–8 °C and for several months at –20 °C, stored frozen in aliquots.

References

1. Rauscher, E., Methods of Enzymatic Analysis, Bergmeyer H.U. (Ed). 3rd Ed., 4, 152-161 (1984).

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