

## Nigerose phosphorylase 65A, *Clostridium phytofermentans*

### CpNig65A (GH65)

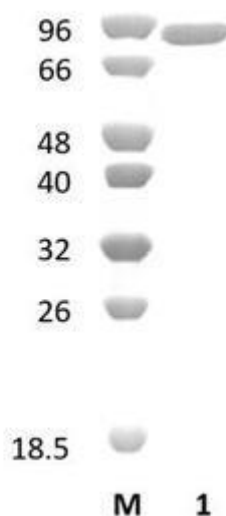
Catalogue number	Presentation
CZ09561	0.25 mg
CZ09562	3 x 0.25 mg

#### Description

Nigerose phosphorylase 65A (CpNig65A), assigned the E.C. number 2.4.1.279, is a derivative of *Clostridium phytofermentans*. It is a nigerose phosphorylase. The recombinant CpNig65A, purified from *Escherichia coli*, is a single-domain Glycoside Hydrolase family 65 (GH65) enzyme (see more details at [www.cazy.org](http://www.cazy.org)). The protein is supplied in a solution containing 35 mM NaHepes buffer (pH 7.5), 750 mM NaCl, 200 mM Imidazole, 3.5 mM CaCl<sub>2</sub>, and 25% (v/v) glycerol, at a concentration of 0.25 mg/mL. Bulk quantities of this product can be made available upon request. To place an order, simply visit our website. We offer fast and secure shipping worldwide.

#### Electrophoretic Purity

The molecular integrity and purity of CpNig65A (GH65) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).



**Figure 1.** SDS-PAGE analysis of CpNig65A (GH65) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 89,26 kDa. Lane M contains a Protein Marker for reference.

#### Storage temperature

The protein should be stored at -30°C to -15°C in a constant temperature freezer. The protein will remain stable till the expiry date if stored as specified.

#### Substrate specificity

CpNig65A (GH65) hydrolyses nigerose and shows weak phosphorolytic activity on kojibiose. The enzyme also showed reverse phosphorolytic activity, in a decreasing order, on D-xylose, 1,5-anhydro-D-glucitol, D-galactose, and methyl- $\alpha$ -D-glucoside.

#### Temperature and pH optima

The enzyme exhibits optimal activity within a pH range of 5.5-9.0 and at a temperature of 40°C. Maximal enzymatic activity is achieved at pH 7 and a consistent temperature of 40°C.

## Enzyme activity

The substrate specificity and kinetic properties of CpNig65A (GH65) are detailed in the referenced publication provided below. To perform enzyme assays and determine specific activity values, adhere to the methodology outlined in the cited paper(s).

## Reference

Nihira *et al.* (2012) Appl Microbiol Biotechnol. 93(4):1513-22.

## Customer Support

Our dedicated customer support team is always ready to assist you with any questions or technical issues you may have. Reach us via email at [info@nzytech.com](mailto:info@nzytech.com).

## Quality control assay

Protein purity is determined to be  $\geq 90\%$ , as assessed by SDS-PAGE and subsequent BlueSafe staining (MB15201).

For life science research only. Not for use in diagnostic procedures.

---

**NZYtech Lda.** Estrada do Paço do Lumiar, Campus do Lumiar - Edifício E, R/C, 1649-038 Lisboa, Portugal Tel.:+351.213643514 Fax:  
+351.217151168 [www.nzytech.com](http://www.nzytech.com)