CZ0414_UG_EN_V2302

# β-Galactosidase 1A, *Sulfolobus solfataricus*

# *Ss*Lac1A (GH1)

| Catalogue number | Presentation |
|---|---|
| CZ04141 | 1 mg |
| CZ04142 | 3 x 1 mg |

## Description

β-Galactosidase 1A (*Ss*Lac1A), assigned the E.C. number 3.2.1.23, is a derivative of *Sulfolobus solfataricus*. It is a β-galactosidase. The recombinant *Ss*Lac1A, purified from *Escherichia coli*, is a single-domain Glycoside Hydrolase family 1 (GH1) enzyme (see more details at 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 $CaCl_2$, and 25% (v/v) glycerol, at a concentration of 1 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 *Ss*Lac1A (GH1) were evaluated using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE), followed by BlueSafe staining (MB15201) (Figure 1).

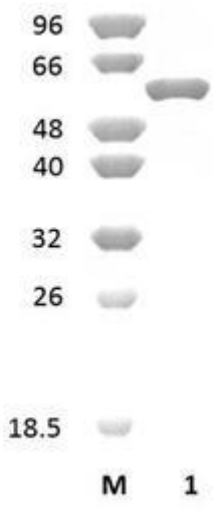


**Figure 1**. SDS-PAGE analysis of *Ss*Lac1A (GH1) was conducted in (Lane 1), employing a 14% polyacrylamide gel. The enzyme exhibits a band corresponding to a molecular weight of approximately 58,78 kDa. Lane M contains a Protein Marker for reference.

## 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

*Ss*Lac1A (GH1) hydrolyses lactose.

## Temperature and pH optima

The enzyme exhibits optimal activity within a pH range of 4.5-7.0 and at a temperature of 50°C. Maximal enzymatic activity is achieved at pH 6 and a consistent temperature of 50°C.

## Enzyme activity

The substrate specificity and kinetic properties of *Ss*Lac1A (GH1) 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

Haseltine *et al.* (1999) J Bacteriol. 181(13):3920–3927.

## 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.

## Quality control assay

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