



β-D-GLUCURONIDASE from *Escherichia coli* (Lot I20502a)

Recombinant

E-BGLAEC

05/13

(EC 3.2.1.31) β-D-glucuronoside glucuronosohydrolase; GUS
CAZy: GH Family 2

PROPERTIES

1. ELECTROPHORETIC PURITY

- Single band on SDS-gel electrophoresis (MW ~ 82,600)
- Single major band on isoelectric focusing (pI ~ 5.4)

2. SPECIFIC ACTIVITY

30000 U/mg protein (on phenolphthalein-β-D-glucuronide) at pH 6.8 and 37°C

One Unit of β-D-glucuronosidase activity is defined as the amount of enzyme required to release one μg of phenolphthalein per hour from phenolphthalein-β-D-glucuronide (0.5 mM) in sodium phosphate buffer (100 mM) at pH 6.8 and 37°C.

110 U/mg protein (on pNP-β-D-glucuronide) at pH 7.5 and 37°C

***One Unit** of β-D-glucuronosidase activity is defined as the amount of enzyme required to release one μmole of p-nitrophenol per minute from pNP-β-D-glucuronide (1 mM) in Tris.HCl buffer (100 mM) pH 7.5 and 37°C, monitored at 410 nm.

* Extinction coefficient (ϵ) of p-nitrophenol = $11418 M^{-1} \times cm^{-1}$

3. SPECIFICITY

Hydrolysis of non-reducing terminal β-D-glucuronic acid residues from glycoproteins and oligosaccharides of glycoconjugates.

4. PHYSICOCHEMICAL PROPERTIES

pH Optima: 5.0 - 7.5**

Temperature Stability: up to 50°C**

5. STORAGE CONDITIONS

The enzyme is supplied in 20 mM Tris.HCl pH 7.5, 50 mM NaCl, 0.1 mM EDTA plus 0.02% (w/v) sodium azide and should be stored at 4°C. For assay, this enzyme should be diluted in sodium phosphate buffer (100 mM), pH 6.8 containing 1 mg/mL BSA.

Swirl to mix the enzyme immediately prior to use.

DO NOT FREEZE / THAW.

6. REFERENCES

Richard A. Jefferson, Sean M. Burgess, & David Hirsh (1986). β-D-Glucuronidase from *Escherichia coli* as a gene-fusion marker. *Prot. Natl. Acad.Sci. USA.* **83**, 8447–8451.

** Literature values