β-GLUCURONIDASE from *Escherichia coli* (Lot 120502c)

Recombinant

E-BGLAEC **06/18**

(EC 3.2.1.31) β-D-glucuronoside glucuronosohydrolase; GUS

CAZy Family: GH43

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 *p*NP-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 *p*NP-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} *x* cm^{-1}

3. SPECIFICTY

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). ß-D-Glucuronidase from *Escherichia coli* as a gene-fusion marker. *Prot. Natl. Acad.Sci. USA.* **83**, 8447–8451.

** *Literature values*