

exo-1,3- β -D-Glucanase + β -Glucosidase (Lot 200301a)

E-EXBGOS

04/22

exo-1,3- β -glucanase from *Trichoderma* sp. (**Recombinant**)

EC: 3.2.1.58

β -Glucosidase from *Aspergillus niger* (**Non-recombinant**)

EC: 3.2.1.21

This enzyme mixture is for use in determination of yeast and mushroom β -glucan as described in the Megazyme Yeast Beta-Glucan Assay Kit (**K-YBGL**).

PROPERTIES

1. ACTIVITY:

100 U/mL *exo*-1,3- β -glucanase

20 U/mL β -glucosidase

One Unit of *exo*-1,3- β -glucanase activity is the amount of enzyme required to release one μ mole of glucose per minute from laminarin (10 mg/mL; *Laminaria digitata*) in sodium acetate buffer (100 mM), pH 4.0 and 40°C.

One Unit of β -glucosidase activity is defined as the amount of enzyme required to release one μ mole of *p*-nitrophenyl per minute from *p*-nitrophenyl β -glucoside in sodium acetate buffer (100 mM), pH 4.0 at 40°C.

2. SPECIFICITY:

***exo*-1,3- β -glucanase:** Successive hydrolysis of β -D-glucose units from the non-reducing ends of (1,3)- β -D-glucans, releasing β -glucose.

β -glucosidase: Hydrolysis of terminal, non-reducing β -D-glucosyl residues with release of β -D-glucose.

3. RATES OF HYDROLYSIS OF SUBSTRATES:

| Substrate | U/mL |
|--|--------|
| Laminarin | 100 |
| Laminaridextrin | ~ 110 |
| Scleroglucan | ~ 60.0 |
| <i>p</i> -Nitrophenyl β -glucoside | ~ 20.0 |
| CM-Cellulose 4M | ~ 2.5 |
| Starch | < 0.01 |
| Ceralpha | < 0.01 |

Actions on *p*NP-substrates, polysaccharides or oligosaccharides was determined at a final substrate concentration of 2.5 mM and 5 mg/mL, respectively, in sodium acetate buffer (100 mM), pH 4.0 at 40°C.

4. STORAGE CONDITIONS:

The enzyme is supplied as a suspension in 3.2 M ammonium sulphate and 0.02% (w/v) sodium azide and should be stored at 4°C. For assay, this enzyme should be diluted in sodium acetate buffer (100 mM), pH 4.0 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**