

Bglu110

β -Glucanase (Laminarinase/Lichenase)

Product information

Available as freeze dried powder.
 Activity: 40 U/mg powder, or 400 U/mg protein.
 Store at 4°C.

Enzyme activity

The enzyme hydrolyses β -glucan polysaccharides with β 1-3 linkages including β 1-3-1-4 linkages or β 1-3-1-6 linkages, such as barley β -glucan lichenan,, scleroglucan and laminarin. High degree of hydrolysis of barley β -glucan indicates that the enzyme is able to hydrolyse β -1-4 linkages in addition to β -1-3 linkages. The enzyme is able to degrade lichenan substrate to mono- and disaccharides. The enzyme does not appear to hydrolyze β 1-6 linkages and the extent of hydrolysis of Laminarin is dependent on the source of the substrate, i.e. proportion of β 1-3 vs β 1-6 linkages, The enzyme has optimum activity at 80°C and pH 7.

Assay

The standard assay for endoglucanase activity was done by incubating the enzyme at 75°C for 15 min, with 1% (w/v) lichenan, as a substrate in 0.1M sodium phosphate buffer, pH 7.0. The reducing sugars released were detected by the dinitrosalicylic acid method using glucose as standard.

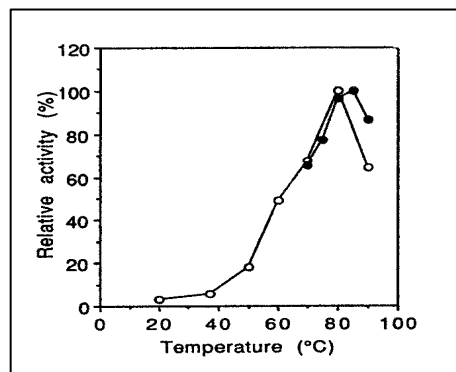
Unit definition

One unit (U) of enzyme activity is the amount that leads to the release of 1 μ mol reducing sugars per minute.

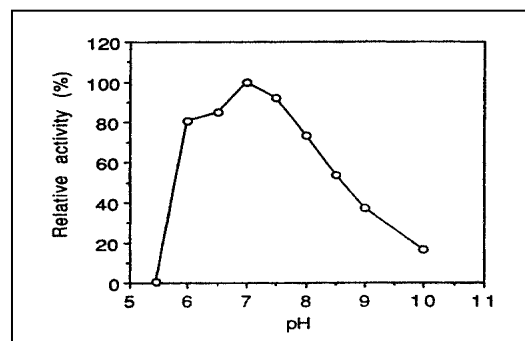
Reference

Spillaert, R. Hreggvidsson, G.O., Kristjansson, J.K., Eggertsson, G. and Palsdottir, 1994. Cloning and sequencing of a *Rhodothermus marinus* gene, *bglA*, coding for a thermostable β -glucanase in *Escherichia coli*. *Eur. J. Biochem.* **224**:923-930.

Temperature optimum



pH optimum



Thermostability

