



COSMO BIO CO., LTD.

Inspiration for Life Science

Yatalase™

from *Corynebacterium* sp. OZ-21

Cat#OZK-OZ-10EX

Package Size : 2 g

Yatalase is used to lyse cell walls of filamentous fungi. The product is prepared from culture supernatants of *Corynebacterium* sp. OZ-21, and consists mainly of chitinase and chitinase.

Feature

Efficiently digests native chitin.

Has the revitalization of Chitinase, Chitinase, Chitosanase, and β -1,3-Glucanase, and Protease.

Can be used alone to prepare protoplasts from filamentous fungi.

Source

Corynebacterium sp. OZ-21 Form : Lyophilized powder (containing lactose)

Storage

Lyophilized preparation is stable for at least 1 year at 4°C.

Maintain at -20°C for long term storage. Avoid freeze/thaw cycles.

Specific activities

Chitinase activity : ≥ 50 units/g powder

Chitinase activity : ≥ 500 units/g powder

Cell-wall lytic activity : $\geq 10,000$ units/g powder

Properties

Optimum pH : pH 5~8

Optimum temperature for enzyme activity : 30~50°C

UNIT DEFINITION

Chitinase activity:

One unit of chitinase activity is determined as the amount required to release 1 μ mol of *N*-acetylglucosamine from 0.5% chitin powder solution in 1 minute at 37°C, pH 6.0.

Chitinase activity:

One unit of chitinase activity is defined as the amount of enzyme required to release 1 μ mol of *p*-nitrophenol from 5 mM *p*-nitrophenyl *N*-acetyl- β -D-glucosaminide solution in 1 minute at 37°C, pH 6.0.

Cell-wall lytic activity:

One unit of enzyme activity is defined as the amount of enzyme required to cause a 1% decrease in absorbance at 660 nm of the cell wall fraction from *Aspergillus oryzae* in 1 hour at 37°C, pH 6.0.

Table 1 Enzyme activities found in Yatalase

Enzyme activity	Activity (units/g powder)
Chitinase	≥ 50
Chitinase	≥ 500
Cell-wall lytic activity	$\geq 10,000$

* Other activities include Chitosanase, β -1,3-Glucanase, and Protease.

Table 2 Yields of protoplasts

Species	Yield of protoplasts
<i>Aspergillus oryzae</i>	+++
<i>Aspergillus terreus</i>	+
<i>Penicillium citrinum</i>	++
<i>Penicillium lanosum</i>	++
<i>Trichoderma koningii</i>	+++
<i>Monascus</i> sp.	+
<i>Pleurotus ostreatus</i>	+



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PROTOCOLS

Example of protoplast preparation conditions

Strains	Culture media	Culture conditions	Conditions for preparing protoplasts *
<i>Aspergillus oryzae</i>	Czapek-Dox +0.5 % Casamino acid	30°C, 40-45 hr Shake culture	2% Yatalase™ solution 0.6 M (NH ₄) ₂ SO ₄ 50 mM maleate buffer (pH 5.5) 30°C, Gentle shaking, 3 hours
<i>Aspergillus terreus</i>	Dextrin-peptone		
<i>Penicillium citrinum</i>			
<i>Penicillium lanosum</i>			
<i>Trichoderma koningii</i>			
<i>Monascus sp.</i>		25°C, 60-70 hr Shake culture	
<i>Pleurotus ostreatus</i>	MYG	30°C, 10-12 days Stationary culture	2% Yatalase™ solution 0.6 M MgSO ₄ 50 mM maleate buffer (pH 5.5) 30°C, Gentle shaking, 3 hours

* 10 mM sodium phosphate buffer (pH 6.0) can also be used instead of 50 mM maleate buffer (pH 5.5).

In addition, 0.8 M NaCl can be used as an alternative to 0.6 M (NH₄)₂SO₄.

To be used for research only. DO NOT use for human gene therapy or clinical diagnosis.

Distributor



人と科学のステキな未来へ
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