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 chitobiase.

Feature

Efficiently digests native chitin.
Has the revitalization of Chitinase, Chitobiase, Chitosanase, and ß-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 strage. Avoid freeze/thaw cycles.

Specific activities

Chitinase activity : ≧ 50 units/g powder
Chitobiase activity : ≧ 500 units/g powder
Cell-wall lytic activity : ≧ 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 µmol of *N*-acetylglucosamine from 0.5% chitin powder solution in 1 minute at 37°C, pH 6.0.

Chitobiase activity:

One unit of chitobiase activity is defined as the amount of enzyme required to release 1 µmol of *p*-nitrophenol from 5 mM *p*-nitrophenyl *N*-acetyl-ß-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
Chitobiase	≧ 500
Cell-wall lytic activity	≧ 10,000

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

Table 2 Yields of protoplasts

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

COSMO BIO CO., LTD.
Inspiration for Life Science

PROTOCOLS

Example of protoplast preparation conditions

Strains	Culture media	Culture conditions	Conditions for preparing protoplasts *
Aspergillus oryzae	Czapek-Dox +0.5% Casamino acid	30°C, 40-45 hr Shake culture	2% Yatalase™ solution 0.6 M $(NH_4)_2SO_4$ 50 mM maleate buffer (pH 5.5) 30°C, Gentle shaking, 3 hours
Aspergillus terreus	Dextrin-peptone		
Penicillium citrinum			
Penicillium lanosum			
Trichoderma koningii			
Monascus sp.		25°C, 60-70 hr Shake culture	
Pleurotus ostreatus	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 $(NH_4)_2SO_4$.

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
コスモ・バイオ株式会社

〒135-0016 東京都江東区
東陽2-2-20 東陽駅前ビル
URL : https://www.cosmobio.co.jp/
- 営業部(お問い合わせ)
  TEL : (03)5632-9610 FAX : (03)5632-9619

COSMO BIO USA

2792 Loker Avenue West, Suite 101
Carlsbad, CA 92010 USA
URL : https://www.cosmobiousa.com/
e-mail : support@cosmobiousa.com
Phone : +1-760-431-4600
Fax : +1-760-431-4604

Manufacture

OZEKI CORPORATION
4-9, Imazu Dezaike-Cho, Nishinomiya-Shi,
Hyogo 663-8227 JAPAN
TEL : +81-798-32-2169
FAX : +81-798-34-7475
URL : https://www.ozeki.co.jp