

YatalaseTM

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 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 strage. Avoid freeze/thaw cycles.

Specific activities

Chitinase activity : ≥ 50 units/g powder Chitobiase 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.

Chitobiase activity:

One unit of chitobiase activity is defined as the amount of enzyme required to release 1 μ mol of p-nitrophenol from 5 mM p-nitrophenyl N-acetyl- θ -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, β-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	+



PROTOCOLS

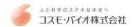
Example of protoplast preparation conditions

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 TM solution 0.6 M (NH ₄) ₂ SO ₄ 50 mM maleate buffer (pH 5.5) 30°C, Gentle shaking, 3 hours
Aspergillus terreus	Dextrin-peptone		
Penicillium citrinum			
Penicillium lanosum			
Trichoderma koningii			
<i>Monascus</i> 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 (NH₄)₂SO₄.

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

Distributor



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