

Recombinant Enzyme for Clinical Diagnostics - UA

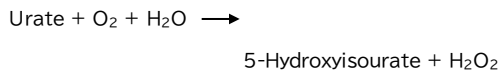
rUricase(Bacteria)-03

rUricase

recombinant Uricase from Bacteria

Urate: oxygen oxidoreductase (EC 1.7.3.3)

Reaction Equation



Specification

Specific activity	
U/mg protein	> 3 units
Contaminants	
Catalase	< 1%

Preparation and Storage

Lyophilized powder
Store below -20°C

Properties

pH stability	: pH 6.0-9.5 (30°C, 1 week)
Thermal stability	: ≤ 55°C (pH 8.5, 10 min)
Optimum pH	: pH 8.5
Optimum temp.	: 45-55°C
Km value	: 1.8 x 10 ⁻⁵ mol/L (Urate, pH 7.0) : 1.6 x 10 ⁻⁵ mol/L (Urate, pH 8.5)
Molecular weight	: approx. 35 kDa (SDS-PAGE)

Assay Procedure

I. Spectrophotometric Method

Wavelength: 293 nm, Light path length: 1 cm
Final volume: 3.02 mL, Temperature: 37°C

Pipette the following reagents into a cuvette

3.0 mL	K-phosphate (50 mmol/L, pH 7.4) containing Borate (50 mmol/L), Urate (0.125 mmol/L)
0.02 mL	rUricase (approx. 1 U/mL)

II. Calculation

$$\text{U/mL} = \frac{\Delta A/\text{min} \cdot V \cdot D}{12.6 \cdot d \cdot v}$$

$\Delta A/\text{min}$: The change in absorbance at 293 nm/minute
(reverse the blank activation of rUricase(-))

V: Total volume of reaction mixture (3.02 mL)

D: Enzyme dilution factor

12.6: mmol/L extinction coefficient of Urate
(L·mmol⁻¹·cm⁻¹)

d: Light path length (1 cm)

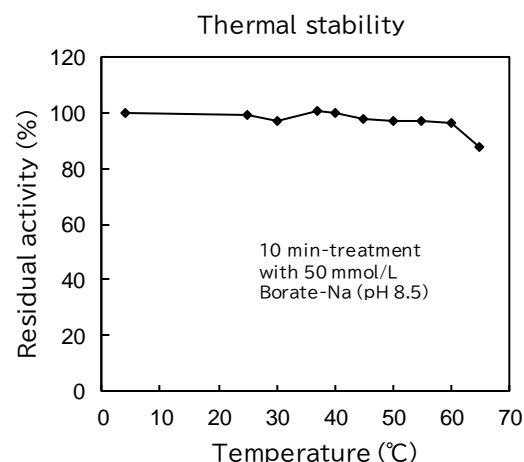
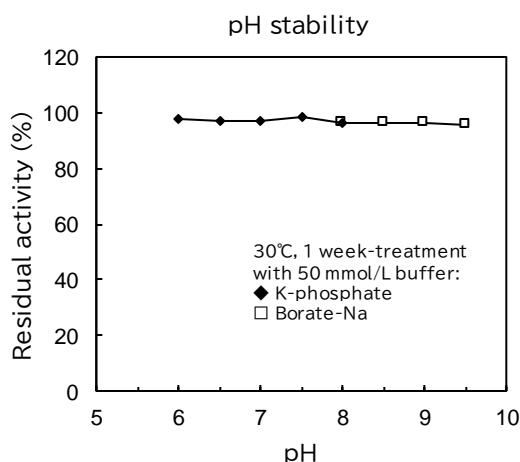
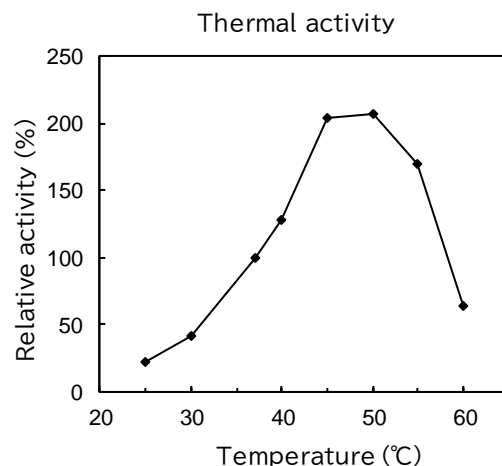
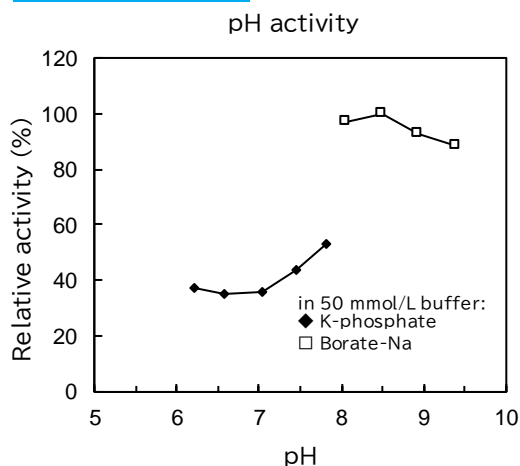
v: Volume of enzyme sample (0.02 mL)

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ORIENTAL YEAST CO.,LTD.

Reference Data



Item	Catalog number	Packing size
rUricase(Bacteria)	46785903	Bulk

*For in vitro diagnostic or research use only.

Oriental Yeast Co., Ltd. (Tokyo, Japan)
Corporate headquarters
URL <https://www.oyc.co.jp/bio/>
E-mail fbi@nisshin.com
Phone +81-3-3968-1192
FAX +81-3-3968-4863

East-Japan Bio Sales Dept. (Tokyo, Japan)
Phone +81-3-3968-1163
FAX +81-3-3968-1196

East-Japan Bio Sales Dept. Sapporo (Hokkaido, Japan)
Phone +81-11-261-6591
FAX +81-11-222-0755

East-Japan Bio Sales Dept. Tsukuba (Ibaraki, Japan)
Phone +81-29-858-0115
FAX +81-29-858-2931

West-Japan Bio Sales Dept. (Osaka, Japan)
Phone +81-6-6338-1095
FAX +81-6-6384-7692

Oriental Bio Service Inc. (Kyoto, Japan)
Phone +81-75-322-1177
FAX +81-75-322-0232

KBT Oriental Co., Ltd. (Saga, Japan)
Phone +81-942-81-2400
FAX +81-942-81-2401

OYC Americas, Inc. (CA, USA)
URL <https://www.oycus.com/>
Phone +1-760-659-5943
FAX +1-760-201-8950

OYC EU B.V. (Rotterdam, The Netherlands)
URL <https://oyceu.com/>
E-mail info@oyceu.com
Phone +31(10)-4145-777
FAX +31(10)-2134-919

Oriental Yeast India Pvt. Ltd. (Navi Mumbai, India)
URL <http://oycindia.com/>
E-mail info@oycindia.com
Phone +91 22-27717107
FAX +91 22-27717107



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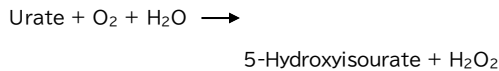
rUricase(Bacteria)-73

rUricase

recombinant Uricase from Bacteria

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Reaction Equation



Specification

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D: Enzyme dilution factor

12.6: mmol/L extinction coefficient of Urate
($\text{L} \cdot \text{mmol}^{-1} \cdot \text{cm}^{-1}$)

d: Light path length (1 cm)

v: Volume of enzyme sample (0.02 mL)

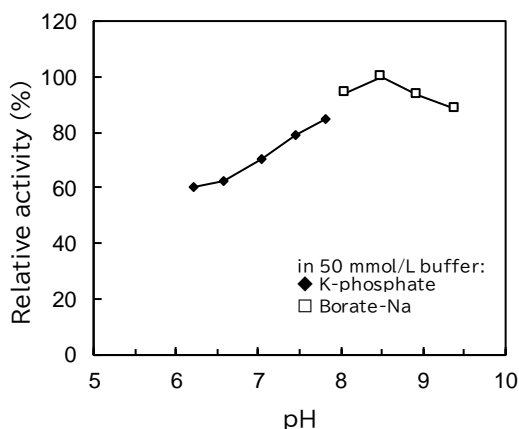
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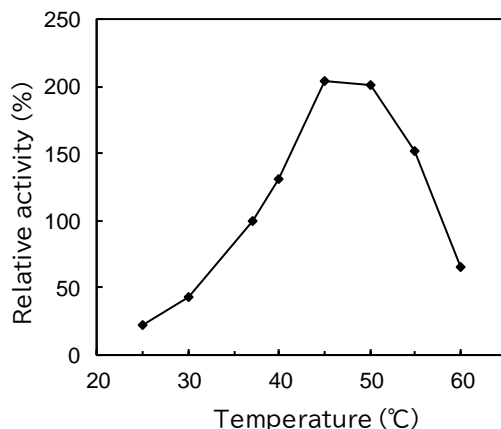
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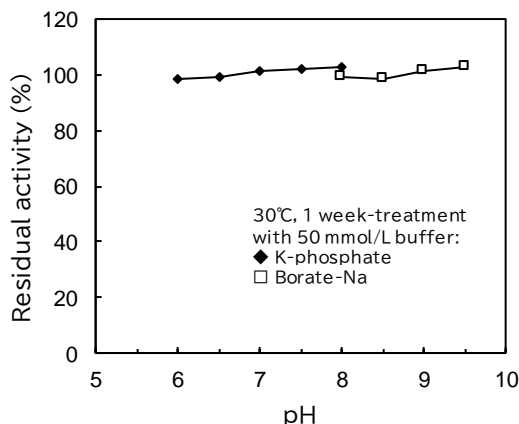
pH activity



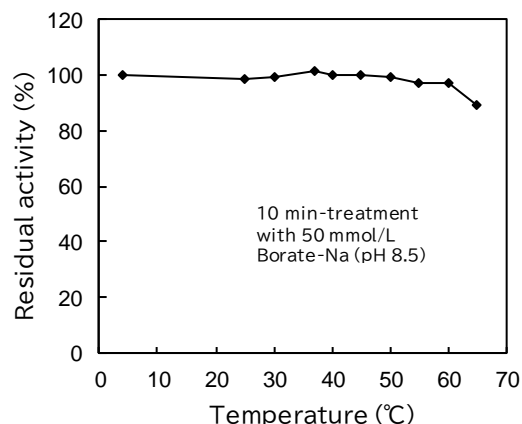
Thermal activity



pH stability



Thermal stability



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