

Native Bovine XOD Protein

Cat. No. XOD-22B **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Chromatographically purified Xanthine Oxidase (XOD) from cow milk. Activator: O₂ Stabilizers: The substance is stabilized by the addition of EDTA; salicylate is not added. Contaminants: <0.005% guanase, NP and uricase, each, <0.05% ADA, <0.05% alkaline phosphatase (4-nitrophenyl phosphate as the substrate)
Species	Bovine
Source	Milk
Description	Xanthine Oxidase (XOD) is a metal flavoprotein. It has FAD, molybdenum and iron in the ratio 2:2:8. Xanthine Oxidase (XOD) exhibits a broad substrate specificity including aldehydes, purines and pteridines. Furthermore, this enzyme reduces oxygen to generate superoxide, hydrogen peroxide and reactive oxygen species (ROS). It also reduces nitrite to yield reactive nitrogen species (RNS), such as peroxynitrite and nitric oxide. Owing to its ability to generate RNS and ROS, XOD might play an important role as an antimicrobial agent in the neonatal gut, thereby complementing endogenous enzyme of the intestinal epithelium.
Form	Suspension
Bio-activity	~1 units/mg protein (At 25 centigrade with xanthine as the substrate.)
Unit definition	One unit (U) xanthine oxidase will produce 1

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

μmol of uric acid (E293nm = 12.2 mmol⁻¹ x L x cm⁻¹) from the oxidation of 1 μmol of xanthine in 1 min at 25 centigrade and pH 8.5.

Applications

Xanthine Oxidase (XOD) has been used in the assessment of XOR-mediated NO production from NDHP and assessment of nitrite-derived NO in liver and purified XOR.

Xanthine Oxidase has been used to study tyrosine nitration.

Notes

For life science research only. Not for use in diagnostic procedures.

pH Range

8.5-9.0

Storage

2-8 centigrade

Storage Buffer

Suspension in 3.2 M ammonium sulfate solution, 10 mM EDTA, pH approximately 8

Shipping

Wet ice

References

1. Synthesis and characterization of a novel organic nitrate NDHP: Role of xanthine oxidoreductase-mediated nitric oxide formation. Zhuge Z, et al. Redox Biology, 13, 163-169 (2017)
2. XANTHINE OXIDASE. VI. INFLUENCE OF PH ON SUBSTRATE SPECIFICITY. L GREENLEE et al. The Journal of biological chemistry, 239, 1090-1095 (1964-04-01)
3. The novel organic mononitrate NDHP attenuates hypertension and endothelial dysfunction in hypertensive rats. Paulo LL, et al. Redox Biology, 15, 182-191 (2018)

GENE INFORMATION

Official Symbol

XOD

Synonyms

XOD; Xanthine Oxidase

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA