

manganese peroxidase

Cat. No. EXWM-0494

Lot. No. (See product label)

Introduction

Description

A hemoprotein. The enzyme from white rot basidiomycetes is involved in the oxidative degradation of lignin. The enzyme oxidizes a bound Mn²⁺ ion to Mn³⁺ in the presence of hydrogen peroxide. The product, Mn³⁺, is released from the active site in the presence of a chelator (mostly oxalate and malate) that stabilizes it against disproportionation to Mn²⁺ and insoluble Mn⁴⁺. The complexed Mn³⁺ ion can diffuse into the lignified cell wall, where it oxidizes phenolic components of lignin and other organic substrates. It is inactive with veratryl alcohol or nonphenolic substrates.

Synonyms

peroxidase-M2; Mn-dependent (NADH-oxidizing) peroxidase

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 1.11.1.13

CAS No.

114995-15-2

Reaction

$2 \text{ Mn(II)} + 2 \text{ H}^+ + \text{H}_2\text{O}_2 = 2 \text{ Mn(III)} + 2 \text{ H}_2\text{O}$

Notes

This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

Storage and Shipping Information

Storage

Store it at +4 °C for short term. For long term storage, store it at -20 °C~-80 °C.