

5-(hydroxymethyl)furfural oxidase

Cat. No. EXWM-0420

Lot. No. (See product label)

Introduction

Description The enzyme, characterized from the bacterium *Methylovorus* sp. strain MP688, is involved in the degradation and detoxification of 5-(hydroxymethyl)furfural. The enzyme acts only on alcohol groups and requires the spontaneous hydration of aldehyde groups for their oxidation. The enzyme has a broad substrate range that overlaps with EC 1.1.3.7, aryl-alcohol oxidase.

Product Information

Form Liquid or lyophilized powder

EC Number EC 1.1.3.47

Reaction 5-(hydroxymethyl)furfural + 3 O₂ + 2 H₂O = furan-2,5-dicarboxylate + 3 H₂O₂ (overall reaction); (1a) 5-(hydroxymethyl)furfural + O₂ = furan-2,5-dicarbalddehyde + H₂O₂; (1b) furan-2,5-dicarbalddehyde + H₂O = 5-(dihydroxymethyl)furan-2-carbalddehyde (spontaneous); (1c) 5-(dihydroxymethyl)furan-2-carbalddehyde + O₂ = 5-formylfuran-2-carboxylate + H₂O₂; (1d) 5-formylfuran-2-carboxylate + H₂O = 5-(dihydroxymethyl)furan-2-carboxylate (spontaneous); (1e) 5-(dihydroxymethyl)furan-2-carboxylate + O₂ = furan-2,5-dicarboxylate + H₂O₂

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.