

pyranose dehydrogenase (acceptor)

Cat. No. EXWM-0457

Lot. No. (See product label)

Introduction

Description

Requires FAD. A number of aldoses and ketoses in pyranose form, as well as glycosides, gluco-oligosaccharides, sucrose and lactose can act as a donor. 1,4-Benzoquinone or ferricenium ion (ferrocene oxidized by removal of one electron) can serve as acceptor. Unlike EC 1.1.3.10, pyranose oxidase, this fungal enzyme does not interact with O₂ and exhibits extremely broad substrate tolerance with variable regioselectivity (C-3, C-2 or C-3 + C-2 or C-3 + C-4) for (di)oxidation of different sugars. D-Glucose is exclusively or preferentially oxidized at C-3 (depending on the enzyme source), but can also be oxidized at C-2 + C-3. The enzyme also acts on 1→4- α - and 1→4- β -gluco-oligosaccharides, non-reducing gluco-oligosaccharides and L-arabinose, which are not substrates of EC 1.1.3.10. Sugars are oxidized in their pyranose but not in their furanose form.

Synonyms

pyranose dehydrogenase; pyranose-quinone oxidoreductase; quinone-dependent pyranose dehydrogenase; PDH

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 1.1.99.29

CAS No.

190606-21-4

Reaction

(1) a pyranose + acceptor = a pyranos-2-ulose (or a pyranos-3-ulose or a pyranos-2,3-diulose) + reduced acceptor; (2) a pyranoside + acceptor = a pyranosid-3-ulose (or a pyranosid-3,4-diulose) + reduced acceptor

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.