Creative Enzymes®

bacterial luciferase

Cat. No. EXWM-0927

Lot. No. (See product label)

Introduction

Description The reaction sequence starts with the incorporation of a molecule of oxygen into reduced FMN bound to the enzyme, forming luciferase peroxyflavin. The peroxyflavin interacts with an aliphatic long-chain aldehyde, producing a highly fluorescent species believed to be luciferase hydroxyflavin. The enzyme is highly specific for reduced FMN and for long-chain aliphatic aldehydes with eight carbons or more. The highest efficiency is achieved with tetradecanal. cf. EC 1.13.12.18, dinoflagellate luciferase.

Synonyms aldehyde monooxygenase; luciferase; Vibrio fischeri luciferase; alkanal,reduced-FMN:oxygen oxidoreductase (1-hydroxylating, luminescing); alkanal,FMNH2:oxygen oxidoreductase (1-hydroxylating, luminescing); alkanal monooxygenase (FMN); aldehyde,FMNH2:oxygen oxidoreductase (1-hydroxylating, luminescing)

Product Information

Form Liquid or lyophilized powder

EC Number EC 1.14.14.3

CAS No. 9014-00-0

Reaction a long-chain aldehyde + FMNH2 + O2 = a long-chain fatty acid + FMN + H2O + hν

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 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.