

## 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, FMNH<sub>2</sub>:oxygen oxidoreductase (1-hydroxylating, luminescing); alkanal monooxygenase (FMN); aldehyde, FMNH<sub>2</sub>: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 + FMNH<sub>2</sub> + O<sub>2</sub> = a long-chain fatty acid + FMN + H<sub>2</sub>O + hv

#### 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.