

sphingolipid 8-(E/Z)-desaturase

Cat. No. EXWM-0992

Lot. No. (See product label)

Introduction

Description

The enzymes from higher plants convert sphinganine, 4E-sphing-4-enine and phytosphinganine into E/Z-mixtures of $\Delta 8$ -desaturated products displaying different proportions of geometrical isomers depending on plant species. The nature of the actual desaturase substrate has not yet been studied experimentally. The enzymes contain an N-terminal cytochrome b5 domain that acts as the direct electron donor to the active site of the desaturase. The homologous enzymes from some yeasts and diatoms, EC 1.14.19.18, sphingolipid 8-(E)-desaturase, act on sphing-4-enine ceramides and produce only the trans isomer.

Synonyms

8-sphingolipid desaturase (ambiguous); 8 fatty acid desaturase (ambiguous); DELTA8-sphingolipid desaturase (ambiguous)

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 1.14.19.29

Reaction

(1) a (4R)-4-hydroxysphinganine ceramide + 2 ferrocytochrome b5 + O₂ + 2 H⁺ = a (4R,8E)-4-hydroxysphing-8-enine ceramide + 2 ferricytochrome b5 + 2 H₂O; (2) a (4R)-4-hydroxysphinganine ceramide + 2 ferrocytochrome b5 + O₂ + 2 H⁺ = a (4R,8Z)-4-hydroxysphing-8-enine ceramide + 2 ferricytochrome b5 + 2 H₂O

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.