

linoleate 8R-lipoxygenase

Cat. No. EXWM-0580

Lot. No. (See product label)

Introduction

Description The enzyme contains heme. The bifunctional enzyme from *Aspergillus nidulans* uses different heme domains to catalyse two separate reactions. Linoleic acid is oxidized within the N-terminal heme peroxidase domain to (8R,9Z,12Z)-8-hydroperoxyoctadeca-9,12-dienoate, which is subsequently isomerized by the C-terminal P-450 heme thiolate domain to (5S,8R,9Z,12Z)-5,8-dihydroxyoctadeca-9,12-dienoate (cf. EC 5.4.4.5, 9,12-octadecadienoate 8-hydroperoxide 8R-isomerase). The bifunctional enzyme from *Gaeumannomyces graminis* also catalyses the oxidation of linoleic acid to (8R,9Z,12Z)-8-hydroperoxyoctadeca-9,12-dienoate, but its second domain isomerizes it to (7S,8S,9Z,12Z)-5,8-dihydroxyoctadeca-9,12-dienoate (cf. EC 5.4.4.6, 9,12-octadecadienoate 8-hydroperoxide 8S-isomerase).

Synonyms linoleic acid 8R-dioxygenase; 5,8-LDS (bifunctional enzyme); 7,8-LDS (bifunctional enzyme); 5,8-linoleate diol synthase (bifunctional enzyme); 7,8-linoleate diol synthase (bifunctional enzyme); PpoA

Product Information

Form Liquid or lyophilized powder

EC Number EC 1.13.11.60

Reaction linoleate + O₂ = (8R,9Z,12Z)-8-hydroperoxyoctadeca-9,12-dienoate

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.