

(-)- α -pinene synthase

Cat. No. EXWM-5131

Lot. No. (See product label)

Introduction

Description Cyclase II of *Salvia officinalis* (sage) gives about equal parts (-)- α -pinene, (-)- β -pinene and (-)-camphene, plus traces of other monoterpenoids. (3S)-Linalyl diphosphate can also be used by the enzyme in preference to (3R)-linalyl diphosphate. The 4-pro-S-hydrogen of geranyl diphosphate is lost. Requires Mg^{2+} (preferred to Mn^{2+}). The enzyme from *Abies grandis* (grand fir) gives roughly equal parts (-)- α -pinene and (-)- β -pinene. However the clone ag11 gave 35% (-)-limonene, 24% (-)- α -pinene and 20% (-)- β -phellandrene. It requires Mn^{2+} and K^+ (Mg^{2+} is ineffective). Synthase I from *Pinus taeda* (loblolly pine) produces (-)- α -pinene with traces of (-)- β -pinene and requires Mn^{2+} (preferred to Mg^{2+}). The enzyme from *Picea sitchensis* (Sika spruce) forms 70% (-)- α -pinene and 30% (-)- β -pinene. The recombinant PmeTPS1 enzyme from *Pseudotsuga menziesii* (Douglas fir) gave roughly equal proportions of (-)- α -pinene and (-)-camphene plus traces of other monoterpenoids. See also EC 4.2.3.120, (-)- β -pinene synthase; EC 4.2.3.117, (-)-camphene synthase; EC 4.2.3.16, (-)-limonene synthase; and EC 4.2.3.52, (-)- β -phellandrene synthase.

Synonyms (-)- α -pinene/(-)-camphene synthase; (-)- α -pinene cyclase

Product Information

Form Liquid or lyophilized powder

EC Number EC 4.2.3.119

Reaction geranyl diphosphate = (-)- α -pinene + diphosphate

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.