

phosphoserine transaminase

Cat. No. EXWM-2894

Lot. No. (See product label)

Introduction

Description

A pyridoxal-phosphate protein. This enzyme catalyses the second step in the phosphorylated pathway of serine biosynthesis in *Escherichia coli*. It also catalyses the third step in the biosynthesis of the coenzyme pyridoxal 5'-phosphate in *Escherichia coli* (using Reaction 2 above). In *Escherichia coli*, pyridoxal 5'-phosphate is synthesized de novo by a pathway that involves EC 1.2.1.72 (erythrose-4-phosphate dehydrogenase), EC 1.1.1.290 (4-phosphoerythronate dehydrogenase), EC 2.6.1.52 (phosphoserine transaminase), EC 1.1.1.262 (4-hydroxythreonine-4-phosphate dehydrogenase), EC 2.6.99.2 (pyridoxine 5'-phosphate synthase) and EC 1.4.3.5 (with pyridoxine 5'-phosphate as substrate). Pyridoxal phosphate is the cofactor for both activities and therefore seems to be involved in its own biosynthesis. Non-phosphorylated forms of serine and threonine are not substrates.

Synonyms

PSAT; phosphoserine aminotransferase; 3-phosphoserine aminotransferase; hydroxypyruvic phosphate-glutamic transaminase; L-phosphoserine aminotransferase; phosphohydroxypyruvate transaminase; phosphohydroxypyruvic-glutamic transaminase; 3-O-phospho-L-serine:2-oxoglutarate aminotransferase; SerC; PdxC; 3PHP transaminase

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 2.6.1.52

CAS No.

9030-90-4

Reaction

(1) O-phospho-L-serine + 2-oxoglutarate = 3-phosphonooxypyruvate + L-glutamate; (2) 4-phosphonooxy-L-threonine + 2-oxoglutarate = (3R)-3-hydroxy-2-oxo-4-phosphonooxybutanoate + L-glutamate

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.