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 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.