Native Escherichia coli Diacylglycerol Kinase

Cat. No. NATE-0181

Lot. No. (See product label)

Introduction

Description	Diacylglycerol kinase (DGK or DAGK) is a family of enzymes that catalyzes the conversion of diacylglycerol (DAG) to phosphatidic acid (PA) utilizing ATP as a source of the phosphate. In non-stimulated cells, DGK activity is low allowing DAG to be used for glycerophospholipid biosynthesis but on receptor activation of the phosphoinositide pathway, DGK activity increases driving the conversion of DAG to PA. As both lipids are thought to function as bioactive lipid signaling molecules with distinct cellular targets, DGK therefore occupies an important position, effectively serving as a switch by terminating the signalling of one lipid while simultaneously activating signalling by another.
Applications	Diacylglycerol Kinase from Escherichia coli has been used in a study to assess the antagonistic regulation of dgkA and plsB genes of phospholipid synthesis by multiple stress responses in Escherichia coli. Diacylglycerol Kinase from Escherichia coli has also been used in a study to identify an alcohol binding site in the first cysteine-rich domain of protein kinase Cdelta.
Synonyms	Diacylglycerol Kinase; DGK; DAGK; EC 2.7.1.107; Diacylglycerol kinase (ATP); sn-1,2-Diacylglycerol kinase

Product Information

Source	E. coli
Form	suspension
EC Number	EC 2.7.1.107
CAS No.	60382-71-0
Molecular Weight	mol wt 13.7 kDa
Buffer	Supplied as a turbid membrane suspension in 25 mM sodium phosphate buffer, pH 7.0, 20.0% glycerol, 1 mM DTT.
Pathway	Glycerolipid metabolism, organism-specific biosystem; Glycerolipid metabolism, conserved biosystem; Metabolic pathways, organism-specific biosystem
Unit Definition	One unit will phosphorylate 1.0 µmol of diacylglycerol per minute at 25°C.

Storage and Shipping Information

Stability	−70°C