Creative Enzymes®

Diguanylate Cyclase from Agrobacterium vitis, recombinant

Cat. No. NATE-1692

Lot. No. (See product label)

Introduction

Description	The diguanylate cyclase from Agrobacterium vitis has been engineered to remove phosphodiesterase activity, allowing for production of cyclic-diGMP from guanosine triphosphate (GTP) without the production of 5'-phosphoguanylyl-(3',5')-guanosine (pGpG).
Applications	Useful for producing cyclic-diGMP from GTP without production of pGpG Completely lacks unwanted phosphodiesterase activity No product inhibition even at high concentrations of GTP Remains active while immobilized to solid resin and retain enzymatic activity after several months of storage Can be used to synthesize radiolabeled cyclic diGMP from radiolabeled GTP
Synonyms	DGC; PleD; EC 2.7.7.65; 146316-82-7; Engineered Diguanylate Cyclase

Product Information

Species	Agrobacterium vitis
Source	E. coli
Form	Liquid
Formulation	0.1 mg/ml (100 U/µl) solution in 50 mM Tris-HCl, 100 mM NaCl, 5 mM DTT and 20% glycerol pH 8.0
EC Number	EC 2.7.7.65
CAS No.	146316-82-7
Molecular Weight	56 kDa
Purity	>99% based on SDS-PAGE analysis with coomassie blue
Activity	7.5 nmol min-1
Concentration	0.8mg/mL
Thermal stability	Reactions can be run at 25 to 37 °C with 50 mM Tris HCl, pH 7.5 containing 5 mM MgCl2 as the buffer
Buffer	50 mM Tris-HCl, pH 7.4, 5 mM β-mercaptoethanol, 10% glycerol, 50 mM arginine, 50 mM glutamic acid, 200 mM sodium chloride, 500 uM ethylenediaminetetraacetic acid (EDTA) and 10% glycerol.
Unit Definition	One unit (U) is 1 µmole of H2 evolved min-1 mg-1.

Storage and Shipping Information

Storage	at -80 °C; Multiple freeze/thaw cycles are not recommended