

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 μM 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