Creative Enzymes®

Native Porcine Phosphodiesterase, 3',5'-Cyclic Nucleotide, Activator-deficient

Cat. No. NATE-0516

Lot. No. (See product label)

Introduction

Description	PDE3 is a phosphodiesterase. The PDEs belong to at least eleven related gene families, which are different in their primary structure, substrate affinity, responses to effectors, and regulation mechanism. Most of the PDE families are composed of more than one gene. PDE3 is clinically significant because of its role in regulating heart muscle, vascular smooth muscle and platelet aggregation. PDE3 inhibitors have been developed as pharmaceuticals, but their use is limited by arrhythmic effects and they can increase mortality in some applications.
Applications	May be used to assay the protein activator, calmodulin.
Synonyms	cyclic 3',5'-mononucleotide phosphodiesterase; PDE; cyclic 3',5'-nucleotide phosphodiesterase; cyclic 3',5'-phosphodiesterase; 3',5'-nucleotide phosphodiesterase; 3':5'-cyclic nucleotide 5'-nucleotidohydrolase; 3',5'-cyclonucleotide phosphodiesterase; cyclic nucleotide phosphodiesterase; 3', 5'-cyclic nucleoside monophosphate phosphodiesterase; 3':5'-monophosphate phosphodiesterase (cyclic CMP); cytidine 3':5'-monophosphate phosphodiesterase (cyclic CMP); cyclic 3',5-nucleotide monophosphate phosphodiesterase; nucleoside 3',5'-cyclic phosphate diesterase; nucleoside-3',5-monophosphate phosphodiesterase; EC 3.1.4.17

Product Information

Species	Porcine
Source	Porcine brain
Form	Lyophilized preparation which has been depleted of calmodulin and containing buffer salts as Tris-HCl.
EC Number	EC 3.1.4.17
CAS No.	9040-59-9
Molecular Weight	mol wt ~60 kDa
Purity	affinity chromatography
Buffer	Reconstitute with 50% glycerol. The total activated units of enzyme will remain constant for at least 5 days when stored at −0°C. However, the calmodulin-deficient activity may increase up to 200%. Both the activated and calmodulin-deficient activity may decrease approx. 30% in 24 hrs. if stored at 4°C.
Pathway	Insulin signaling pathway, organism-specific biosystem; Insulin signaling pathway, conserved biosystem; Morphine addiction, organism-specific biosystem; Morphine addiction, conserved biosystem; Progesterone-mediated oocyte maturation, organism-specific biosystem; Progesterone-mediated oocyte maturation, conserved biosystem; Purine metabolism, organism-specific biosystem
Unit Definition	One unit will hydrolyze 1.0 umole of 3':5' -cyclic-AMP to 5'-AMP per min at pH 7.5 at

Unit Definition	One unit will hydrolyze 1.0 μmole of 3′,5′-cyclic AMP to 5′-AMP per min at pH 7.5 at 30°C.

Usage and Packaging

Package	Package size based on activated units.

Storage and Shipping Information

Storage	−20°C