Creative Enzymes®

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

Cat. No. NATE-0514

Lot. No. (See product label)

Introduction

Description	Hydrolyzes the 3',5'-phosphodiester bond in cyclic nucleotide monophosphates, such as cAMP and cGMP, to the corresponding nucleotide 5'-monophosphate.
Applications	Cyclic nucleotide phosphodiesterase has been investigated for its mechanism of activation as a function of calmodulin and Ca2+. It has also been used in a study to show that the binding of trifluoperazine to the activator of cyclic nucleotide phosphodiesterase increases the activity by over 10-fold. For use in calmodulin (P 0270) assay. Activity is reduced to <50% without calmodulin present.
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	Bovine
Source	Bovine heart
Form	lyophilized powder (contains imidazole buffer salts and magnesium sulfate)
EC Number	EC 3.1.4.17
CAS No.	9040-59-9
Molecular Weight	mol wt ~60 kDa
Activity	>0.1 units/mg protein (with added activator)
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 activator deficient activity may increase up to 200%. If stored at 4°C, both the activated and activator deficient activity, may decrease approx. 30% in 24 hrs.
Function	calcium-and calmodulin-regulated 3',5'-cyclic-GMP phosphodiesterase activity; calmodulin-dependent cyclic-nucleotide phosphodiesterase activity; protein binding
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