

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 Ca^{2+} . 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 $-0^{\circ}C$. However, the activator deficient activity may increase up to 200%. If stored at $4^{\circ}C$, 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 μ mole of 3':5',-cyclic-AMP to 5'-AMP per min at pH 7.5 at $30^{\circ}C$.

Usage and Packaging

Package Package size based on activated units

Storage and Shipping Information

Storage $-20^{\circ}C$

