

cAMP

Catalog Number :6099240

RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Synonyms: Cyclic AMP, Adenosine cyclic monophosphate, Cyclic adenosine monophosphate

Chemical Name: (4aR,6R,7R,7aS)-6-(6-aminopurin-9-yl)-2-hydroxy-2-oxo-4a,6,7,7a-tetrahydro-4H-furo[3,2-d][1,3,2]dioxaphosphinin-7-ol

Molecular Formula: C₁₀H₁₂N₅O₆P

Molecular Weight: 329.2

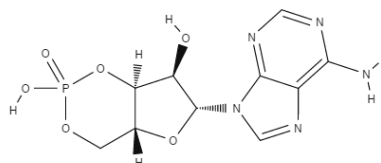
CAS Number: 60-92-4

Purity: ≥98%

Applications: FA

Formulation: Crystalline solid

Storage: Product should be kept at -20°C.



Description

cAMP is an adenosine triphosphate (ATP) derivative and used for intracellular signal transduction. cAMP decomposition into AMP is catalyzed by the enzyme phosphodiesterase. cAMP is a second messenger that can transfer hormones such as adrenaline and glucagon that cannot pass through the plasma membrane. It is also reported to be involved in the activation of protein kinases and the regulation of calcium channels.

Preparation & Storage

Soluble in water or organic solvents such as ether. Water up to 7mM.

References

1. Bourne, H. R., Weinstein, Y., Melmon, K. L., Lichtenstein, L. M., Henney, C. S., Shearer, G. M. (1974). Modulation of inflammation and immunity by cyclic AMP.; *Science*,;184(4132), 19-28.
2. De Rooij, J., Zwartkruis, F. J., Verheijen, M. H., Cool, R. H., Nijman, S. M., Wittinghofer, A., Bos, J. L. (1998). Epac is a Rap1 guanine-nucleotide-exchange factor directly activated by cyclic AMP.; *Nature*,;396(6710), 474-477.
3. DiFrancesco, D., Tortora, P. (1991). Direct activation of cardiac pacemaker channels by intracellular cyclic AMP.; *Nature*,;351(6322), 145-147.