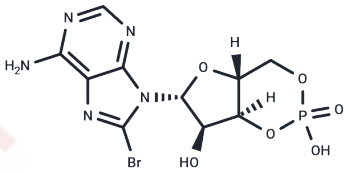
Data Sheet (Cat.No.T35424)

TargetMol

8-Bromo-cAMP

Chemical Properties



CAS No. : 23583-48-4

Formula: C10H11BrN5O6P

Molecular Weight: 408.1

Storage: Keep away from moisture,Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	8-Bromo-cAMP is a cell-permeable cAMP analogue and activator of CAMP-dependent protein kinase A that induces cell death and reduces proliferation.
Targets(IC50)	Apoptosis,cAMP,PKA
In vitro	In primary rat renal tubular epithelial cells, 8-Bromo-cAMP (0.1mM, 48h) significantly increased both mRNA and protein levels of Na^+-K^+-ATPase α1 and β1 subunits, and promoted their membrane localization, suggesting enhancement of tubular ion transport via PKA signaling[1]. In NRK-52E rat renal proximal tubule epithelial cells, 8-Bromo-cAMP (10^{-6}–10^{-3}mol/L, 48h) significantly increased protein and mRNA levels of Na^+-K^+-ATPase α1 and β1 subunits (most prominently at 10^{-4}mol/L), and promoted their membrane localization, suggesting regulation via the cAMP/PKA signaling pathway[2].
In vivo	In renal denervation rat models, 8-Bromo-cAMP (0.5mmol/L, perfused via the left renal artery at 0.05mL/min for 60min) significantly increased expression of Na^+-K^+-ATPase α1 and β1 subunits in the renal cortex, indicating its ability to enhance sodium pump activity and support renal ion transport in vivo[2].

Solubility Information

Solubility	PBS (pH 7.2): 2 mg/mL (4.9 mM),Sonication is recommended. 1M NaOH: 83.33 mg/mL (204.19 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4504 mL	12.2519 mL	24.5038 mL
5 mM	0.4901 mL	2.4504 mL	4.9008 mL
10 mM	0.245 mL	1.2252 mL	2.4504 mL
50 mM	0.049 mL	0.245 mL	0.4901 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Wang Y, Adjaye J. A cyclic AMP analog, 8-Br-cAMP, enhances the induction of pluripotency in human fibroblast cells. Stem Cell Rev Rep. 2011 Jun;7(2):331-41.

Wang S, Zhang Z, Qian W, Ji D, Wang Q, Ji B, Zhang Y, Zhang C, Sun Y, Zhu C, Sun Y. Angiogenesis and vasculogenic mimicry are inhibited by 8-Br-cAMP through activation of the cAMP/PKA pathway in colorectal cancer. Onco Targets Ther. 2018 Jul 2;11:3765-3774.

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