

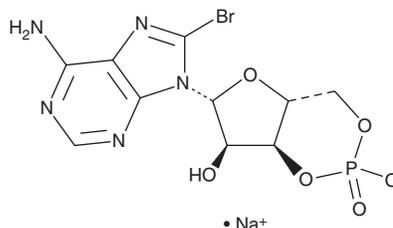
PRODUCT INFORMATION



8-bromo Cyclic AMP (sodium salt)

Item No. 14431

CAS Registry No.: 76939-46-3
Formal Name: 8-bromo-cyclic 3',5'-(hydrogen phosphate)-adenosine, monosodium salt
Synonyms: 8-Bromoadenosine 3',5'-cyclic monophosphate, 8-bromo cAMP
MF: C₁₀H₁₀BrN₅O₆P • Na
FW: 430.1
Purity: ≥95%
UV/Vis.: λ_{max}: 265 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

8-bromo Cyclic AMP (8-bromo cAMP) (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the 8-bromo cAMP (sodium salt) in water. The solubility of 8-bromo cAMP (sodium salt) in water is approximately 25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

8-bromo Cyclic AMP is an activator of protein kinase A (PKA) with a half-maximal activation (K_a) value of 0.05 μ M.¹ It is selective for PKA over cGMP-dependent protein kinase (PKG; $K_a = 5.8 \mu$ M) and is more resistant to hydrolysis by phosphodiesterases (PDEs) compared with cAMP (Item No. 18820).^{1,2} 8-bromo Cyclic AMP inhibits the proliferation of HL-60 leukemia cells ($IC_{50} = 18 \mu$ M after six days).² It induces relaxation of isolated rabbit carotid or renal arterial rings precontracted with phenylephrine when used at concentrations ranging from 10 to 300 μ M.³ Intradermal administration of 8-bromo cyclic AMP (10 nmol/site) prevents scratching and increases in cutaneous leukotriene B₄ (LTB₄) production induced by the proteinase-activated receptor 2 (PAR2) agonist SLIGRL-NH₂ (Item No. 16723) in mice.⁴

References

1. Sandberg, M., Butt, E., Nolte, C., *et al.* Characterization of Sp-5,6-dichloro-1- β -D-ribofuranosylbenzimidazole-3',5'-monophosphorothioate (Sp-5,6-DCI-cBiMPS) as a potent and specific activator of cyclic-AMP-dependent protein kinase in cell extracts and intact cells. *Biochem. J.* **279**(Pt 2), 521-527 (1991).
2. Yokozaki, H., Tortora, G., Pepe, S., *et al.* Unhydrolyzable analogues of adenosine 3':5'-monophosphate demonstrating growth inhibition and differentiation in human cancer cells. *Cancer Res.* **52**(9), 2504-2508 (1992).
3. Minonishi, T., Ogawa, K., Tokinaga, Y., *et al.* Differential vasodilation response to olprinone in rabbit renal and common carotid arteries. *J. Anesth.* **24**(1), 61-66 (2010).
4. Andoh, T. and Kuraishi, Y. Antipruritic mechanisms of topical E6005, a phosphodiesterase 4 inhibitor: Inhibition of responses to proteinase-activated receptor 2 stimulation mediated by increase in intracellular cyclic AMP. *J. Dermatol. Sci.* **76**(3), 206-213 (2014).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 07/06/2023

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM