bio-techne
TOCRIS

Print Date: Mar 15th 2024

Certificate of Analysis

www.tocris.com

Product Name: **8-Bromo-cAMP, sodium salt** **Catalog No.: 1140** **Batch No.: 13**

CAS Number: 76939-46-3

IUPAC Name: 8-Bromoadenosine-3',5'-cyclic monophosphate sodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{10}H_{10}BrN_5NaO_6P.1¼H_2O$

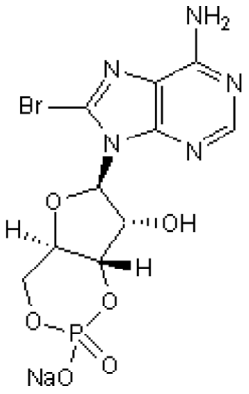
Batch Molecular Weight: 452.61

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.4% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	26.54	2.78	15.47
Found	26.04	2.67	14.93

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IUPAC Name: 8-Bromoadenosine-3',5'-cyclic monophosphate sodium salt

Description:

8-Bromo-cAMP, sodium salt is a cell-permeable cyclic AMP (cAMP) analog. It activates PKA and has greater resistance to hydrolysis by phosphodiesterase (PDE) than cAMP. It increases differentiation and induces apoptosis in an esophageal cancer cell line. 8-Bromo-cAMP enhances the induction of pluripotency in human fibroblast cells in combination with VPA (valproic acid) (Cat. No. 2815). In combination with IBMX (Cat. No. 2845), it promotes the differentiation of human iPS cell-derived intestinal epithelial cells. It induces cell-based VEGF production for angiogenesis and osteoblastic differentiation in vitro. Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

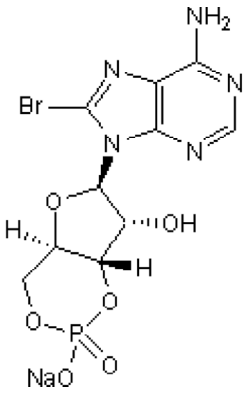
Batch Molecular Formula: $C_{10}H_{10}BrN_5NaO_6P.1¼H_2O$

Batch Molecular Weight: 452.61

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

water to 100 mM
DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Lo *et al* (2016) One-day treatment of small molecule 8-bromo-cyclic AMP analogue induces cell-based VEGF production for *in vitro* angiogenesis and osteoblastic differentiation. J.Tissue.Eng.Regen. Med. ***10*** 867. PMID: 24493289.

Wang *et al* (2011) A cyclic AMP analog, 8-Br-cAMP, enhances the induction of pluripotency in human fibroblast cells. Stem Cell Rev. ***7*** 331. PMID: 21120637.

Wang *et al* (2005) Dual effects of 8-Br-cAMP on differentiation and apoptosis of human esophageal cancer cell line Eca-109. World J.Gastroenterol. ***11*** 6538. PMID: 16425431.