Certificate of Analysis

Product Name: **8CPT-2Me-cAMP, sodium salt** **Catalog No.: 1645** **Batch No.: 8**

CAS Number: 634207-53-7

IUPAC Name: 8-(4-Chlorophenylthio)-2'-*O*-methyladenosine-3',5'-cyclic monophosphate sodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{17}H_{16}ClN_5O_6PS.Na$

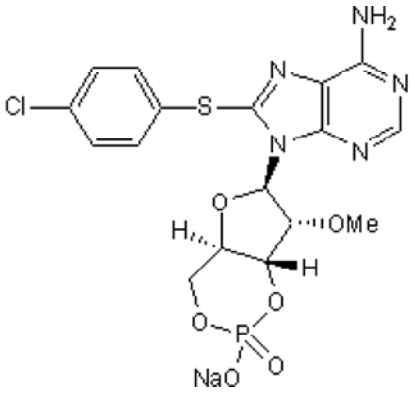
Batch Molecular Weight: 507.82

Physical Appearance: White lyophilised solid

Solubility: water to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.8% purity

Mass Spectrum: Consistent with structure

Product Name: 8CPT-2Me-cAMP, sodium salt **Catalog No.:** 1645 8

CAS Number: 634207-53-7

IUPAC Name: 8-(4-Chlorophenylthio)-2'-*O*-methyladenosine-3',5'-cyclic monophosphate sodium salt

Description:

8-CPT-2Me-cAMP, sodium salt is a selective activator of Epac, the cAMP-sensitive guanine nucleotide-exchange factor for Rap1 and Rap2. Activates Epac1 (EC_{50} = 2.2 µM), but not PKA (EC_{50} > 10 µM). Stimulates Epac-mediated Ca^{2+}-mediated Ca^{2+} release in pancreatic β-cells in vitro. Cell permeable analog (Cat. No. 4853) also available.

Physical and Chemical Properties:

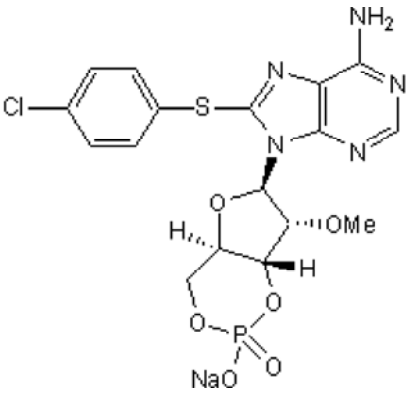
Batch Molecular Formula: $C_{17}H_{16}ClN_5O_6PS.Na$

Batch Molecular Weight: 507.82

Physical Appearance: White lyophilised solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

water to 100 mM

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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. Our standard recommendations are:

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.

Licensing Information:

Sold with the permission of BioLog Life Science Institute

References:

Kang *et al* (2003) Epac-selective cAMP analog 8-pCPT-2'-*O*-Me-cAMP as a stimulus for Ca^{2+}-induced Ca^{2+} release and exocytosis in pancreatic βcells. J.Biol.Chem. ***278*** 8279. PMID: 12496249.

Enserink *et al* (2002) A novel Epac-specific cAMP analogue demonstrates independent regulation of Rap1 and ERK. Nat.Cell.Biol. ***4*** 901. PMID: 12402047.

Kawasaki *et al* (1998) A family of cAMP-binding proteins that directly activate Rap1. Science ***282*** 2275. PMID: 9856955.