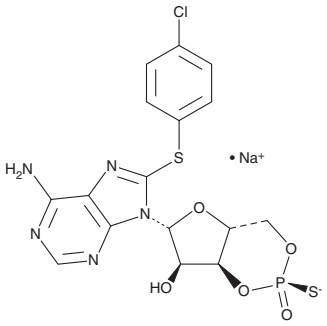
PRODUCT INFORMATION

Rp-8-CPT-Cyclic AMP (sodium salt)

Item No. 17142



CAS Registry No.:	221905-35-7
Formal Name:	8-[(4-chlorophenyl)thio]-adenosine cyclic 3',5'-[hydrogen (R)-phosphorothioate], monosodium salt
Synonym:	Rp-8-CPT-cAMP
MF:	$C_{16}H_{14}ClN_5O_5PS_2 \bullet Na$
FW:	509.8
Purity:	≥98%
UV/Vis.:	λ_{max}: 275 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

Rp-8-CPT-Cyclic AMP (Rp-8-CPT-cAMP) (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the Rp-8-CPT-cAMP (sodium salt) in the solvent of choice, which should be purged with an inert gas. Rp-8-CPT-cAMP (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of Rp-8-CPT-cAMP (sodium salt) in these solvents is approximately 0.5, 25, and 30 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of Rp-8-CPT-cAMP (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of Rp-8-CPT-cAMP (sodium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Rp-8-CPT-cAMP is a structural combination of the lipophilic and non-hydrolyzable cAMP analogs, 8-CPT-cyclic AMP (Item No. 12011) and Rp-cyclic AMPS (Item No. 16985).[1] It functions as a site-selective inhibitor of protein kinase A (PKA) type I and II, with preference towards site A of type I and site B of type II.[2] By occupying cAMP binding sites at the regulatory subunit of PKA, Rp-8-CPT-cAMP prevents the kinase holoenzyme from dissociative activation.[2,3]

References

1. Schwede, F., Maronde, F., Genieser, H., *et al.* Cyclic nucleotide analogs as biochemical tools and prospective drugs. *Pharmacol. Ther.* **87(2)**, 199-226 (2000).
2. Dostmann, W.R., Taylor, S.S., Genieser, H.G., *et al.* Probing the cyclic nucleotide binding sites of cAMP-dependent protein kinases I and II with analogs of adenosine 3',5'-cyclic phosphorothioates. *J. Biol. Chem.* **265(18)**, 10484-10491 (1990).
3. Gjertsen, B.T., Mellgran, G., Otten, A., *et al.* Novel (Rp)-cAMPS analogs as tools for inhibition of cAMP-kinase in cell culture. Basal cAMP-kinase activity modulates interleukin-1b action. *J. Biol. Chem.* **270(35)**, 20599-20607 (1995).

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