

PRODUCT INFORMATION



8-pCPT-2'-O-Me-Cyclic AMP (sodium salt)

Item No. 17143

Protected by Patent No. EP 02077219.0 and foreign equivalents. Exclusively licensed to BIOLOG Life Science Institute for research purposes only.

CAS Registry No.: 634207-53-7

Formal Name: 8-[(4-chlorophenyl)thio]-2'-O-methyl-adenosine cyclic 3',5'-(hydrogen phosphate), monosodium salt

Synonyms: 8-CPT-2Me-cAMP, 8-pCPT-cAMP, 8-pCPT-2'-O-Me-cAMP

MF: C₁₇H₁₆N₅O₆CIPS • Na

FW: 507.8

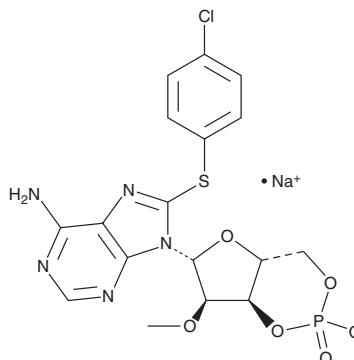
Purity: ≥98%

UV/Vis.: λ_{max}: 210, 224, 283 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

8-pCPT-2'-O-Me-Cyclic AMP (8-pCPT-2'-O-Me-cAMP) (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the 8-pCPT-2'-O-Me-cAMP (sodium salt) in the solvent of choice. 8-pCPT-2'-O-Me-cAMP (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of 8-pCPT-2'-O-Me-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 8-pCPT-2'-O-Me-cAMP (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 8-pCPT-2'-O-Me-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

Exchange proteins activated by cAMP (Epacs) are guanine nucleotide exchange factors (GEFs) for the small GTPases Rap1 and Rap2.¹ 8-pCPT-2'-O-Me-cAMP is an 8-(4-chlorophenylthio) analog of cAMP that activates Epacs (AC₅₀ = 1.8 μM).² It is a super-activator of Epacs in that it dissociates GDP from Rap1 more strongly than the natural Epac agonist, cAMP.^{2,3} 8-pCPT-2'-O-Me-cAMP is strongly selective for Epac over the cAMP-activated kinase PKA.³ It does not discriminate between Epac1 and Epac2 and is used extensively to elucidate the roles of these Rap GEFs in cell function.^{1, 4-6}

References

1. Breckler, M., Berthouze, M., Laurent, A.-C., *et al. Cell. Signal.* **23(8)**, 1257-1266 (2011).
2. Rehmann, H., Schwede, F., Døskeland, S.O., *et al. J. Biol. Chem.* **278(40)**, 38548-38556 (2003).
3. Christensen, A.E., Selheim, F., de Rooij, J., *et al. J. Biol. Chem.* **278(37)**, 35394-35402 (2003).
4. Kang, G., Chepurny, O.G., Malester, B., *et al. J. Physiol.* **573(Pt 3)**, 595-609 (2006).
5. Eid, A.H., Chotani, M.A., Mitra, S., *et al. Am. J. Physiol. Heart Circ. Physiol.* **295(1)**, H266-H272 (2008).
6. Quan, Y., Jiang, J., and Dingledine, R. *J. Biol. Chem.* **288(13)**, 9293-9302 (2013).

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, 04/22/2016

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