

PRODUCT INFORMATION



8-pCPT-2'-O-methyl Cyclic AMP

Item No. 17143

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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-2-methyl cAMP, 8-CPT-2-methyl Cyclic adenosine monophosphate, 8-pCPT cAMP, 8-pCPT Cyclic adenosine monophosphate, 8-pCPT Cyclic AMP, 8-pCPT-2'-O-methyl cAMP, 8-pCPT-2'-O-methyl Cyclic adenosine monophosphate

MF: C₁₇H₁₆N₅O₆ClPS • Na

FW: 507.8

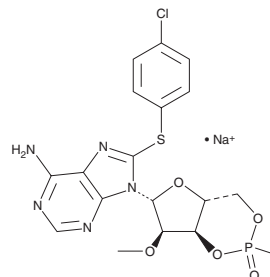
Purity: ≥98%

UV/Vis.: λ_{max}: 210, 224, 283 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-pCPT-2'-O-methyl Cyclic AMP (8-pCPT-2'-O-Me-cAMP) is supplied as a crystalline solid. A stock solution may be made by dissolving the 8-pCPT-2'-O-Me-cAMP in the solvent of choice, which should be purged with an inert gas. 8-pCPT-2'-O-Me-cAMP is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 8-pCPT-2'-O-Me-cAMP 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 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 8-pCPT-2'-O-Me-cAMP 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

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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.

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