PRODUCT INFORMATION

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

Item No. 17143

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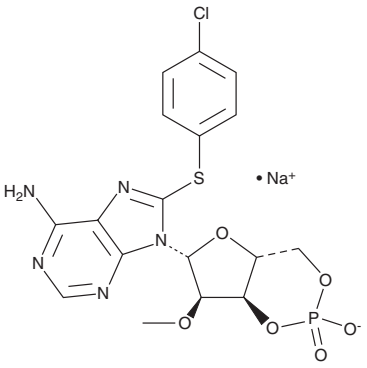

CAS Registry No.: 634207-53-7
Formal Name: 8-[(4-chlorophenyl)thio]-2'-O-methyl-adenosine cyclic 3',5'-(hydrogen phosphate), monosodium salt
Synonyms: 8-CPT-2Me-cAMP, 8-pCPT-cAMP, 8-pCPT-2′-O-Me-cAMP
MF: $C_{17}H_{16}N_5O_6ClPS \bullet Na$
FW: 507.8
Purity: ≥98%
UV/Vis.: λ_{max}: 210, 224, 283 nm
Supplied 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 (AC_{50} = 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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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