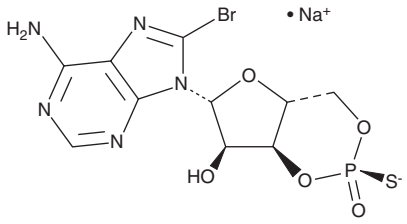
PRODUCT INFORMATION

Rp-8-bromo-Cyclic AMPS (sodium salt)

Item No. 21584

CAS Registry No.: 925456-59-3
Formal Name: 8-bromo-adenosine cyclic 3',5'-[hydrogen [P(R)]-phosphorothioate], monosodium salt
Synonyms: 8-Bromoadenosine 3',5'-cyclic monophosphorothioate, Rp-isomer, Rp-8-Br-cAMPS, Rp-8-bromo-cAMPS
MF: $C_{10}H_{10}BrN_5O_5PS \bullet Na$
FW: 446.1
Purity: ≥98%
UV/Vis.: λ_{max}: 212, 263 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-bromo-Cyclic AMPS (Rp-8-bromo-cAMPS) (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the Rp-8-bromo-cAMPS (sodium salt) in the solvent of choice. Rp-8-bromo-cAMPS (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 Rp-8-bromo-cAMPS (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-bromo-cAMPS (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of Rp-8-bromo-cAMPS (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-bromo-cAMPS (sodium salt) is a cell-permeable cAMP analog that combines an exocyclic sulfur substitution in the equatorial position of the cyclophosphate ring with a bromine substitution in the adenine base of cAMP.[1,2] It acts as an antagonist of cAMP-dependent protein kinases (PKAs) and is resistant to hydrolysis by cyclic nucleotide phosphodiesterases. Rp-8-bromo-cAMPS (sodium salt) more effectively antagonizes cAMP-dependent activation of purified PKA type I from rabbit muscle than PKA type II from bovine heart.[2]

References

1. 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).
2. 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-1β action. *J. Biol. Chem.* **270(35)**, 20599-20607 (1995).

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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