

Product Information

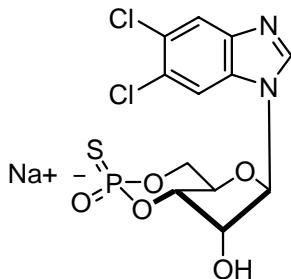
Sp-5,6-DCI-cBIMPS

Product Number **S 6069**

Store at -70 °C

CAS RN: 120912-54-1 (Free acid)

Synonym: 5,6-Dichloro-1-β-D-ribofuranosylbenzimidazole-3',5'-cyclic monophosphorothioate, Sp- isomer, sodium salt



Molecular Formula: C₁₂H₁₀Cl₂N₂O₅PSNa

Molecular Weight: 419.15

Product Description

Sp-5,6-DCI-cBIMPS is an analog of the second messenger cyclic AMP in which the adenine is replaced by a highly lipophilic modified benzimidazole ring. In addition, the axial exocyclic oxygen atom in the cyclic phosphate group is replaced by sulfur.

Sp-5,6-DCI-cBIMPS is a potent activator of cAMP-dependent protein kinase (cAK), and has exhibited a special preference for the B site of cAK type II.¹ Its high lipophilicity and metabolic stability results in excellent

membrane permeability. It is especially useful for studies with intact cells² and can be used for synergistic activation of cAK II by pairs of cAMP analogs.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Sp-5,6-DCI-cBIMPS is soluble in water at ~1 mM. It is also soluble in DMSO, ethanol

Storage/Stability

Store at -70 °C.

References

1. Dostmann, W.R.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**, 10484-10491 (1990).
2. Sandberg, M., et al., Characterization of Sp-5,6-dichloro-1-beta-D-ribofuranosylbenzimidazole- 3',5'-monophosphorothioate (Sp-5,6-DCI-cBIMPS) as a potent and specific activator of cyclic-AMP-dependent protein kinase in cell extracts and intact cells., *Biochem. J.*, **279**, 521-527 (1991).
3. Harayama, H., Viability and Protein Phosphorylation Patterns of Boar Spermatozoa Agglutinated by Treatment with a Cell-permeable Cyclic Adenosine 3', 5'-monophosphate Analog., *J. Androl.*, **24**, 831 - 842 (2003).

AH/PHC 11/04

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.