Product Information

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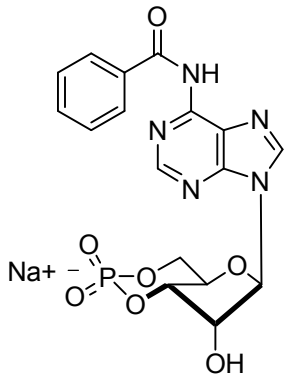
6-Bnz-cAMP sodium

Catalog Number **B4560**
Storage Temperature –70 °C

CAS RN 30275-80-0 (free acid)
Synonyms: N^6- Benzoyladenosine- 3′,5′- cyclic monophosphate sodium salt



Product Description
Molecular Formula: $C_{17}H_{15}N_5O_7PNa$
Formula Weight: 455.29

6-Bnz-cAMP is an analog of the natural signal molecule cyclic AMP in which a lipophilic benzoyl group replaces one hydrogen atom of the amino group in position 6 of the heterocyclic nucleobase. The substitution with the benzoyl group results in considerably higher lipophilicity and membrane permeability compared to cAMP. 6-Bnz-cAMP is a potent, selective activator of cAMP-dependent protein kinase (PKA), which is only slowly metabolized by mammalian cyclic nucleotide-responsive phosphodiesterases.

Due to its unique site selectivity it is often used as a partner for selective stimulation of PKA type I or type II by synergistic pairs of cAMP analogs. If 6-Bnz-cAMP is combined with an analog which selects site B of PKA I (e.g., 8-AHA-cAMP, Catalog Number A2104), selectively type I of PKA is activated. On the other hand, combination with a structure that prefers site B of PKA II (such as Sp-8-pCPT-cAMPS, Catalog Number C8990) elective synergistic stimulation of only type II of PKA can be achieved.

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
6-Bnz-cAMP is readily soluble in water or buffers. Rinse tube walls carefully and preferably use ultrasonic or vortex mixing to achieve total and uniform dissolution.

Storage/Stability
The product ships on dry ice and storage at –70 °C with desiccation is recommended.

References
1. Kopperud, R., et al., cAMP Effector Mechanisms. Novel Twists for an 'Old' Signaling System, FEBS Lett., **546**, 121-126 (2003):
2. Schwede, F., et al., Cyclic Nucleotide Analogs as Biochemical Tools and Prospective Drugs. Pharmacol. Ther., **87**, 199-226 (2000).
3. Christensen, A.E., et al. cAMP analog mapping of Epac1 and cAMP kinase. Discriminating analogs demonstrate that Epac and cAMP kinase act synergistically to promote PC-12 cell neurite extension. J. Biol. Chem., **278**, 35394-35402 (2003).

KAA,AH,PHC,MAM 02/08-1