Catalog # 10-2627

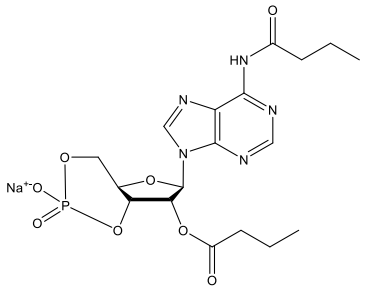
Dibutyryl cAMP

CAS# 16980-89-5

N^6,$O^{2'}$-Dibutyryl adenosine 3',5'-cyclic monophosphate sodium salt;

Bucladesine Na

Lot # X101762



Cell-permeable cAMP analog which mimics the effect of endogenous cAMP when applied to cells.[1] Activates PKA.[2,3] Induces morphological differentiation of astrocytes.[4] Promotes differentiation of dopaminergic neurons from hPSCs (in cocktails with other agents).[5]

1) Bartsch *et al*. (2003), *Bioactivatable, membrane-permeant analogs of cyclic nucleotides as biological tools for growth control of C6 glioma cells*; Biol. Chem., **384** 1321
2) Carranza *et al*. (1998), *Protein kinase A induces recruitment of active Na+,K+-ATPase units to the plasma membrane of rat proximal convoluted tubule cells*; J. Physiol., **15** 511
3) Hei *et al*. (1991), *Lack of correlation between activation of cyclic AMP-dependent protein kinase and inhibition of contraction of rat vas deferens by cyclic AMP analogs*; Mol. Pharmacol., **39** 233
4) Imamura *et al*. (1998), *Differential expression of dystrophin isoforms and utrophin during dibutyryl-cAMP-induced morphological differentiation of rat brain astrocytes*; Proc. Natl. Acad. Sci. USA, **95** 6139
5) Xia *et al*. (2016), *Transcriptional comparison of human induced and primary midbrain dopaminergic neurons*; Sci. Rep., **6** 20270

PHYSICAL DATA

Molecular Weight:	491.37
Molecular Formula:	$C_{18}H_{23}N_5O_8P \cdot Na$
Purity:	98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (up to 50 mg/ml) or Water (up to 50 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO or distilled water may be stored at -20°C for up to 1 month.

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