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PRODUCT INFORMATION

Dibutyl-Cyclic GMP (sodium salt)

Item No. 15991

CAS Registry No.: 51116-00-8

Formal Name: N-(1-oxobutyl)-cyclic 3',5'-(hydrogen phosphate) 2'-butanoate guanosine, monosodium salt

Synonyms: Dibutyl-cGMP, Dibutyl Guanosine 3',5'-cyclic monophosphate

MF: $C_{18}H_{23}N_5O_9P \cdot Na$

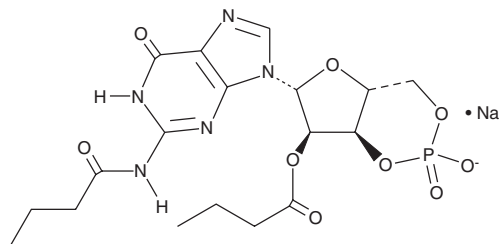
FW: 507.4

Purity: $\geq 98\%$

Stability: ≥ 2 years at $-20^\circ C$

Supplied as: A crystalline solid

UV/Vis.: λ_{max} : 254, 284 nm



Laboratory Procedures

For long term storage, we suggest that dibutyl-cyclic GMP (dibutyl-cGMP) (sodium salt) be stored as supplied at $-20^\circ C$. It should be stable for at least two years.

Dibutyl-cGMP (sodium salt) is supplied as a crystalline solid. Aqueous solutions of dibutyl-cGMP (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of dibutyl-cGMP (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

Dibutyl-cGMP is a cell-permeable, cGMP analog that activates cGMP-dependent protein kinase.¹ It has been used in a wide variety of research applications to mimic cGMP interactions and effects on different biological molecules.²⁻⁵

References

1. Cataldi, M., Secondo, A., D'Alessio, A., *et al.* Involvement of phosphodiesterase-cGMP-PKG pathway in intracellular Ca^{2+} oscillations in pituitary GH₃ cells. *Biochim. Biophys. Acta.* **1449**(2), 186-193 (1999).
2. Willmott, N.J., Asselin, J., and Galione, A. Calcium store depletion potentiates a phosphodiesterase inhibitor- and dibutyl cGMP-evoked calcium influx in rat pituitary GH₃ cells. *FEBS Lett.* **386**(1), 39-42 (1996).
3. Kaplan, S.S., Billiar, T., Curran, R.D., *et al.* Inhibition of chemotaxis with NG-monomethyl-L-arginine: A role for cyclic GMP. *Blood* **74**(6), 1885-1887 (1989).
4. Chik, C.L., Liu, Q.Y., Li, B., *et al.* cGMP inhibits L-type Ca^{2+} channel currents through protein phosphorylation in rat pinealocytes. *J. Neurosci.* **15**(4), 3104-3109 (1995).
5. Rooney, T.A., Joseph, S.K., Queen, C., *et al.* Cyclic GMP induces oscillatory calcium signals in rat hepatocytes. *J. Biol. Chem.* **271**(33), 19817-19825 (1996).

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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