

# PRODUCT INFORMATION



## Dibutyryl-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

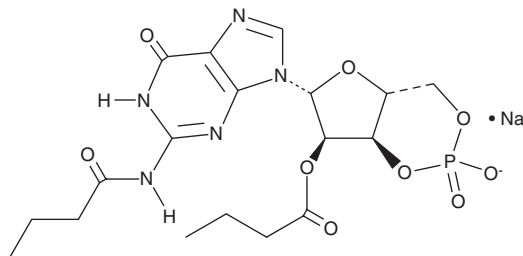
Synonyms: Dibutyryl-cGMP, Dibutyryl Guanosine 3',5'-cyclic monophosphate

MF: C<sub>18</sub>H<sub>23</sub>N<sub>5</sub>O<sub>9</sub>P • Na

FW: 507.4

Purity: ≥98%

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

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

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

### References

1. Cataldi, M., Secondo, A., D'Alessio, A., *et al.* Involvement of phosphodiesterase-cGMP-PKG pathway in intracellular Ca<sup>2+</sup> oscillations in pituitary GH<sub>3</sub> 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 dibutyryl cGMP-evoked calcium influx in rat pituitary GH<sub>3</sub> 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<sup>2+</sup> 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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