

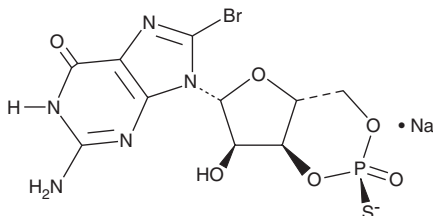
# PRODUCT INFORMATION



## Rp-8-bromo-Cyclic GMPS (sodium salt)

Item No. 18441

**CAS Registry No.:** 208445-06-1  
**Formal Name:** 8-bromo-guanosine  
cyclic 3',5'-[(R)-(hydrogen  
phosphorothioate)], monosodium salt  
**Synonym:** Rp-8-bromo-cGMPS  
**MF:** C<sub>10</sub>H<sub>10</sub>BrN<sub>5</sub>O<sub>6</sub>PS • Na  
**FW:** 462.1  
**Purity:** ≥99%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Rp-8-bromo-cGMPS (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the Rp-8-bromo-cGMPS (sodium salt) in water. We do not recommend storing the aqueous solution for more than one day.

### Description

8-bromo cGMP (Item No. 15992) is a cell-permeable analog of cGMP that exhibits resistance to hydrolysis by phosphodiesterases. It preferentially activates cGMP-dependent protein kinase (cGK).<sup>1</sup> Rp-8-bromo-cGMPS is a cell-permeable cGMP analog that adds an equatorial exocyclic (Rp) sulfur substitution in the axial position of the cyclophosphate ring of 8-bromo-cGMP. Like 8-bromo-cGMP, Rp-8-bromo-cGMPS is resistant to hydrolysis by phosphodiesterases. This Rp isomer binds cGK without activating it, resulting in competitive inhibition.<sup>2,3</sup> At 10 μM, it blocks the relaxation of rat tail arteries induced by the nitric oxide donor SIN-1 (Item No. 82220).<sup>4</sup>

### References

1. Rashatwar, S.S., Cornwell, T.L., and Lincoln, T.M. Effects of 8-bromo-cGMP on Ca<sup>2+</sup> levels in vascular smooth muscle cells: Possible regulation of Ca<sup>2+</sup>-ATPase by cGMP-dependent protein kinase. *Proc. Natl. Acad. Sci. USA* **84**(16), 5685-5689 (1987).
2. Butt, E., van Bemmelen, M., Fischer, L., et al. Inhibition of cGMP-dependent protein kinase by (Rp)-guanosine 3',5'-monophosphorothioates. *FEBS Lett.* **263**(1), 47-50 (1990).
3. Butt, E., Pöhler, D., Genieser, H.-G., et al. Inhibition of cyclic GMP-dependent protein kinase-mediated effects by (Rp)-8-bromo-PET-cyclic GMPS. *Br. J. Pharmacol.* **116**, 3110-3116 (1995).
4. Ouedraogo, S., Tschöp, M., Stoclet, J.-C., et al. Effects of cyclic GMP and analogues on neurogenic transmission in the rat tail artery. *Br. J. Pharmacol.* **112**, 867-872 (1994).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 07/05/2023

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
[WWW.CAYMANCHEM.COM](http://WWW.CAYMANCHEM.COM)