

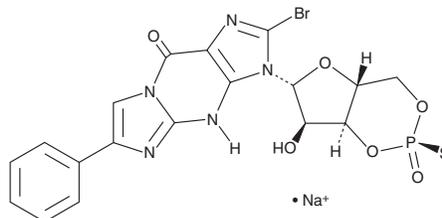
# PRODUCT INFORMATION



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

Item No. 18823

**CAS Registry No.:** 185246-32-6  
**Formal Name:** 2-bromo-3,4-dihydro-3-[3,5-O-[(R)-mercaptophosphinylidene]-β-D-ribofuranosyl]-6-phenyl-9H-imidazo[1,2-a]purin-9-one, monosodium salt  
**Synonym:** Rp-8-bromo-PET-cGMPS  
**MF:** C<sub>18</sub>H<sub>14</sub>BrN<sub>5</sub>O<sub>6</sub>PS • Na  
**FW:** 562.3  
**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-PET-Cyclic GMPS (Rp-8-bromo-PET-cGMPS) (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the Rp-8-bromo-PET-cGMPS (sodium salt) in water. We do not recommend storing the aqueous solution for more than one day.

### Description

Rp-8-bromo-PET-cGMPS is an analog of cyclic GMP (cGMP). It is a cell permeable, competitive, and reversible inhibitor of cGMP-dependent protein kinases (cGKs) that blocks activation of cGKI and cGKII by cGMP ( $K_{iS} = 35$  and  $30$  nM).<sup>1,2</sup> It less potently inhibits protein kinase A ( $K_i = 11$  μM) and cGMP-induced activation of cyclic nucleotide-gated channels ( $IC_{50} = 25$  μM).<sup>1,3</sup> In the absence of cGMP stimulation, Rp-8-bromo-PET-cGMPS can act as a partial agonist of cGKI ( $K_i = 1$  μM).<sup>2</sup> Rp-8-bromo-PET-cGMPS is resistant to hydrolysis by phosphodiesterase 11.<sup>4</sup>

### References

1. 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(8)**, 3110-3116 (1995).
2. Valtcheva, N., Nestorov, P., Beck, A., *et al.* The commonly used cGMP-dependent protein kinase type I (cGKI) inhibitor Rp-8-Br-PET-cGMPS can activate cGKI in vitro and in intact cells. *J. Biol. Chem.* **284(1)**, 556-562 (2009).
3. Wei, J.Y., Cohen, E.D., Yan, Y.Y., *et al.* Identification of competitive antagonists of the rod photoreceptor cGMP-gated cation channel: Beta-phenyl-1,N2-etheno-substituted cGMP analogues as probes of the cGMP-binding site. *Biochemistry* **35(51)**, 16815-16823 (1996).
4. Jäger, R., Russwurm, C., Schwede, F., *et al.* Activation of PDE10 and PDE11 phosphodiesterases. *J. Biol. Chem.* **287(2)**, 1210-1219 (2012).

#### 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.

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#### 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