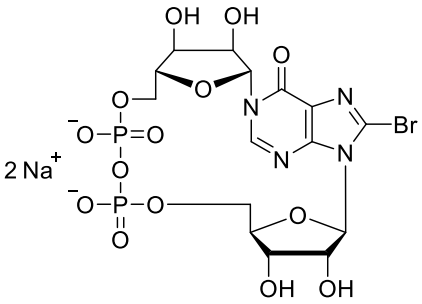
BIOLOG - LIFE SCIENCE INSTITUTE -

Technical Information about
8- Bromo- cyclic inosine diphosphate ribose

Update: May 10, 2017 AI



Abbreviation: **8-Br-N^1-cIDPR**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
$C_{15}H_{19}BrN_4O_{14}P_2$	[638195-70-7]	621.2 (free acid)	λ_{max} 255 nm / ε 11145 / pH 4.9	B 071

Name: 8- Bromo- cyclic inosine diphosphate ribose

Description: 8-Br-N^1-cIDPR is an analogue of the second messenger cyclic adenosine diphosphate ribose (cADPR, BIOLOG Cat. No. C 005) in which the amino group in position 6 of the heterocyclic nucleobase has been replaced by oxygen. In addition, the hydrogen in position 8 of the nucleobase is replaced by bromine.

Properties: 8-Br-N^1-cIDPR is a membrane-permeant and more stable analogue of the second messenger cADPR.

Specification: Crystallized or lyophilized sodium salt. The free acid or other salt forms are available upon request. Please keep in mind that equal concentrations of the compound may look different in volume due to sensitivity of the lyophilized form to humidity. The compound can even contract to small volume droplets. Normally the product is located in the conical bottom of the tube. Micromolar quantities are determined by UV at λ_{max}.

Purity: Typical analysis is better than 97% (HPLC / UV / 255 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: 8-Br-N^1-cIDPR has excellent solubility in water and aqueous buffers. Please rinse tube walls carefully and preferably use ultrasonic or vortex to achieve total and uniform mixing. When opening the tube please make sure that no substance is lost within the cap.

Stability and Storage: 8-Br-N^1-cIDPR is chemically relatively stable. Nevertheless, we recommend that the compound should be stored in the freezer (-20° celsius necessary, -80° recommended), for longer storage periods preferably in freeze-dried form.

Toxicity and Safety: Since cADPR seems to have tasks in every organism, it is not unlikely that its analogues will interfere with many cell regulation processes *in vivo*. However, due to the rather small quantities to work with, no health hazards have been reported. Nevertheless please keep in mind, that the *in vivo* properties of this compound are not sufficiently characterized up to now. Avoid skin contact or ingestion and allow only trained personnel to handle the product.
Our products are designed, developed and sold for research purposes only! They are intended for *in vitro* and nonhuman *in vivo* laboratory applications. Any other use requires approval of health authorities.
Not for drug, household or related uses!

Selected References for 8-Br-N^1-cIDPR:

Kirchberger, T.; Moreau, C.; Wagner, G.K.; Fliegert, R.; Siebrands, C.C.; Nebel, M.; Schmid, F.; Harneit, A.; Odoardi, F.; Flügel, A.; Potter, B.V.L.; Guse, A.H., *Biochem. J.*, **422**, 139 - 149 (2009): "8-Bromo-Cyclic Inosine Diphosphoribose: Towards a Selective Cyclic ADP-Ribose Agonist"

BIOLOG Life Science Institute, Bremen, Germany Phone: 49 (0) 421 591355 Fax: 49 (0) 421 5979713 e-mail: service@biolog.de

Kirchberger, T.;Wagner, G.; Xu, J.; Cordiglieri, C.; Wang, P.; Gasser, A.; Fliegert, R.; Bruhn, S.; Flügel, A.; Lund, F.E.; Zhang, L.-h.; Potter, B.V.L.; Guse, A.H., *Br. J. Pharmacol.*, **149**, 337 - 344 (2006): "Cellular Effects and Metabolic Stability of *N*1-cyclic Inosine Diphosphoribose and its Derivatives"

Wagner, G.K.; Black, S.; Guse, A.H.; Potter, B.V.L., *J. Chem. Soc. Chem. Commun.*, 1944 - 1945 (2003): "First Enzymatic Synthesis of an N1-cyclised cADPR (cyclic-ADP Ribose) Analogue with a Hypoxanthine Partial Structure: Discovery of a Membrane Permeant cADPR Agonist"

BIOLOG Life Science Institute, Bremen, Germany Phone: 49 (0) 421 591355 Fax: 49 (0) 421 5979713 e-mail: service@biolog.de