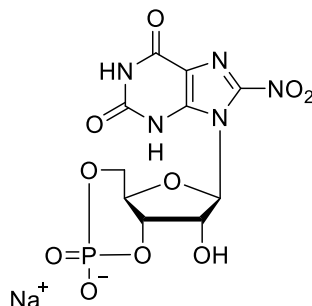


Technical Information about 8-NO₂-cXMP

Update: May 10, 2022 ss



Abbreviation: 8-NO₂-cXMP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₀ H ₉ N ₅ O ₁₀ P · Na	[pending]	413.2	λ _{max} 415 nm / ε 10200 / pH 7	N 060

Name: 8- Nitroxanthosine- 3', 5'- cyclic monophosphate, sodium salt

Description: 8-NO₂-cXMP is an analogue of the parent compound cyclic XMP (cXMP, Biolog Cat. No. X 001) in which the hydrogen in position 8 of the heterocyclic nucleobase is replaced by NO₂.

Properties: 8-NO₂-cXMP is structurally related to and a potential metabolite of 8-NO₂-cGMP (Biolog Cat. No. N 011).

Specification: Lyophilized or crystallized solid. Equal concentrations of 8-NO₂-cXMP can appear very 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 98% (HPLC / UV / 415 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: 8-NO₂-cXMP is soluble in water (≥ 35 mM, limits have not been determined). 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-NO₂-cXMP has sufficient stability for short-term exposure to room temperature and does not need special care during handling or shipment. Nevertheless, the compound should be protected from light and stored in the freezer, for longer storage periods preferably in freeze-dried form.

Toxicity and Safety: 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 Reference for 8-NO₂-cXMP: 8-NO₂-cXMP is a new product and there are currently no corresponding references available.

Selected References for the Related Compound 8-NO₂-cGMP (Biolog Cat. No. N 011):

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Kurauchi Y.; Hisatsune A.; Isohama Y.; Sawa T.; Akaike T.; Shudo K.; Katsuki H., *J. Neurochem.*, **116**, 323 - 333 (2011): "Midbrain Dopaminergic Neurons Utilize Nitric Oxide/cyclic GMP Signaling to Recruit ERK that Links Retinoic Acid Receptor Stimulation to Up-regulation of BDNF"

Okamoto T.; Khan S.; Oyama K.; Fujii S.; Sawa T.; Akaike T., *J. Clin. Biochem. Nutr.*, **46**, 14 - 19 (2010): "A New Paradigm for Antimicrobial Host Defense Mediated by a Nitrated Cyclic Nucleotide"

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