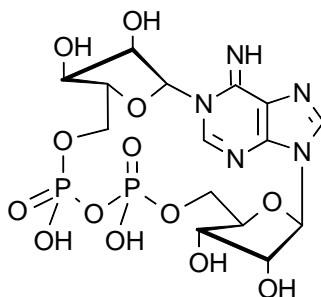


Technical Information about Cyclic ADP Ribose

Update: April 19, 2011 wh



Abbreviation: cADPR

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₅ H ₂₁ N ₅ O ₁₃ P ₂ for free acid	[119340-53-3]	541.3 for free acid	λ _{max} 260 nm / ε 12400 / pH 7	C 005

Name: Cyclic adenosine diphosphate ribose (cADPR)

Description: cADPR is an analogue of ADP ribose in which the C-1 of the free ribose is connected to the nitrogen in position 1 of the adenine nucleobase yielding a macrocyclic ring system (Kim et al. 1993).

Properties:

- Mobilizes intracellular calcium and regulates calcium-induced calcium release (Lee et al. 1989),
- mediates glucose-dependent insulin release (Takasawa et al. 1993), and calcium release in plants (Wu et al. 1997).

Specification: Crystallized or lyophilized ammonium salt. Contains no buffer salts. 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}. For bulk quantities please inquire.

Purity: Typical analysis is better than 98% (HPLC / UV / 260 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: cADPR has excellent solubility in water and 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: cADPR has limited stability at ambient temperature. Therefore, we recommend to store the compound 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 it 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!

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