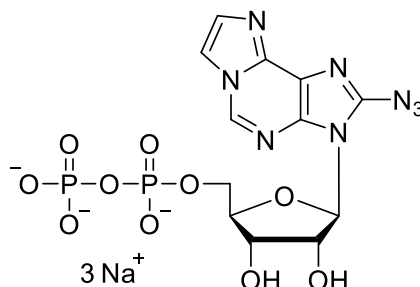


## Technical Information about 8-Azido-1,N<sup>6</sup>-ethenoadenosine-5'-O-diphosphate

Update: July 25, 2019 HU



**Abbreviation:**

**8-N<sub>3</sub>-ε-ADP**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C <sub>12</sub> H <sub>15</sub> N <sub>8</sub> O <sub>10</sub> P <sub>2</sub> (for free acid)	[pending]	493.3 (for free acid)	λ <sub>max</sub> 290 nm / ε 10000 / pH 7	A 210

**Name:** 8- Azido- 1, N<sup>6</sup>- ethenoadenosine- 5'- O- diphosphate

**Description:** 8-N<sub>3</sub>-ε-ADP is an analogue of the parent structure adenosine-5'-O-diphosphate in which both the N<sup>1</sup> and the N<sup>6</sup> nitrogen atoms in the adenine nucleobase are connected by an etheno bridge forming a tricyclic ring system. In addition, the position 8 of the adenine nucleobase has been modified by an azido group.

**Properties:** 8-N<sub>3</sub>-ε-ADP combines the photosensitive activity of 8-N<sub>3</sub>-ADP (Cat. No. A 044) and the fluorescent properties of ε-ADP (Cat. No. E 007). It is useful for photoaffinity labelling of ADP binding proteins and subsequent detection of the fluorescent label (λ<sub>exc</sub> 285 nm, λ<sub>em</sub> 410 nm). Alternatively, detection may be achievable by using an ethenoadenosine-specific antibody (1G4, compare: Krebs, C.; Koestner, W.; Nissen, M.; Welge, V.; Parusel, I.; Malavasi, F.; Leiter, E.H.; Santella, R.M.; Haag, F.; Koch-Nolte, F., *Anal. Biochem.*, **314**, 108 - 115 (2003): "Flow Cytometric and Immunoblot Assays for Cell Surface ADP-ribosylation using a Monoclonal Antibody specific for Ethenoadenosine").

**Specification:** Aqueous solution of the sodium salt (10 mM). Other salt forms of 8-N<sub>3</sub>-ε-ADP are available upon request. Micromolar quantities are determined by UV at λ<sub>max</sub>. When opening the tube please make sure that no liquid is lost within the cap. A short spin-down in a bench centrifuge is recommended before use.

**Purity:** Typical purity is better than 95% (HPLC / UV / 290 nm) at time of quality control and packing. However, actual purity depends on storage and transport conditions. The product is not sterile and has not been tested for endotoxins.

**Stability and Storage:** 8-N<sub>3</sub>-ε-ADP is most stable when stored as aqueous solution in the freezer (-20° Celsius necessary, -80° recommended), however, at ambient temperature the compound slowly starts to decompose. Thus, in order to maintain its original high quality it is recommended to allow thawing only before using the product. If you will not use up the vial with one application, please aliquot the contents of the vial in order to avoid repeated freeze/thaw cycles for the rest. When making such aliquots be sure to operate quickly and to freeze the vial again as soon as possible. **Also, the compound should be protected from light.**

**Toxicity and Safety:** Since diphosphates have multiple tasks in every organism, it is very likely that ADP 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 the related Compound 8-N<sub>3</sub>-ε-ATP (Cat. No. A 211):**

Schäfer, H.-J.; Scheurich, P.; Rathgeber, G.; Dose, K., *Anal. Biochem.*, **104**, 106- 111 (1980): "Fluorescent Photoaffinity Labeling of F<sub>1</sub> ATPase from *Micrococcus luteus* with 8-Azido-1,N<sup>6</sup>-etheno-adenosine 5'-triphosphate"

Schäfer, H.-J.; Scheurich, P.; Rathgeber, G.; Dose, K., *Nucleic Acids Res.*, **5**, 1345 - 1351 (1978): "Synthesis and Properties of 8-Azido-1, N<sup>6</sup>-etheno adenosine triphosphate - a Fluorescent and Photosensitive ATP Analog"