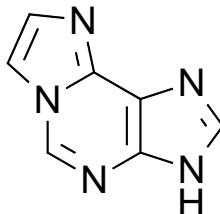


## Technical Information about 1,N<sup>6</sup>-Ethenoadenine

Update: February 22, 2011 AI



**Abbreviation:**

$\epsilon$ -Ade

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C <sub>7</sub> H <sub>5</sub> N <sub>5</sub>	[13875-63-3]	159.2	$\lambda_{\max}$ 275 nm / $\epsilon$ 6000 / pH 7	E 012

**Name:** 1, N<sup>6</sup>- Ethenoadenine

**Description:**  $\epsilon$ -Ade is an analogue of adenine 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.

**Properties:**  $\epsilon$ -Ade is a fluorescent analogue of adenine and potential biomarker of lipid peroxidation.

**Specification:** Crystallized or lyophilized solid. 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  $\lambda_{\max}$ .

**Purity:** Typical analysis is better than 97% (HPLC / UV / 275 nm). The product is not sterile and has not been tested for endotoxins.

**Solubility:**  $\epsilon$ -Ade has limited solubility in water or buffer but should be better soluble in organic solvents such as DMSO. 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:**  $\epsilon$ -Ade has sufficient stability for short term exposure to ambient temperature and does not need special care during handling or shipment. Nevertheless, we recommend that the compound should be protected from light and stored in the freezer, for longer storage periods preferably in freeze-dried form.

**Toxicity and Safety:** Since adenine has multiple tasks in every organism, it is very likely 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 $\epsilon$ -Ade:

Chen, H.J.; Chang, C.M.; *Chem. Res. Toxicol.*, **17**, 963 - 971 (2004): "Quantification of Urinary Excretion of 1,N<sup>6</sup>-Ethenoadenine, a Potential Biomarker of Lipid Peroxidation, in Humans by Stable Isotope Dilution Liquid Chromatography-Electrospray Ionization-Tandem Mass Spectrometry: Comparison with Gas Chromatography-Mass Spectrometry"

Holt, S.; Yen, T.Y.; Sangaiah, R.; Swenberg, J.A., *Carcinogenesis*, **19**, 1763 - 1769 (1998): "Detection of 1,N<sup>6</sup>-Ethenoadenine in Rat Urine after Chloroethylene Oxide Exposure"

Dutta, S.P.; Mittelman, A.; Chheda, G.B., *Biochem. Med.*, **23**, 179 - 184 (1980): "Metabolism of 1,N<sup>6</sup>-Ethenoadenosine"