

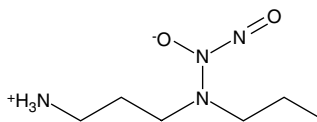
Product Information



PAPA NONOate

Item No. 82140

CAS Registry No.: 146672-58-4
Formal Name: (Z)-1-[N-(3-aminopropyl)-N-(n-propyl)amino]diazene-1-ium-1,2-diolate
Synonym: Propylamine propylamine NONOate
MF: C₆H₁₆N₄O₂
FW: 176.2
Purity: ≥98%
Stability: ≥1 year at -80°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 250 nm



Laboratory Procedures

For long term storage, keep PAPA NONOate sealed under nitrogen at -80°C. It should be stable for at least one year. The crystals are sensitive to moisture and become discolored on exposure to air. Keep the vial sealed until use unless your laboratory is equipped with a glove box with an inert atmosphere for the handling of air sensitive compounds.

PAPA NONOate dissociates to the free amine and nitric oxide in a pH-dependent manner following first order kinetics. Alkaline solutions of NONOates (in 0.01 M NaOH) are very stable and can be stored at 0°C for 24 hours. PAPA NONOate is highly soluble in water and relatively concentrated solutions can be prepared for further dilution. To initiate the release of nitric oxide, add a portion of the stock alkaline solution of PAPA NONOate to excess buffer of pH 7.0-7.4. The half-life of PAPA NONOate is 76.6 minutes and 15 minutes at 22°C and 37°C, respectively, in 0.1 M phosphate buffer (pH 7.4). The decomposition of NONOates is nearly instantaneous at pH 5.¹

PAPA NONOate is a NO donor. It spontaneously dissociates in a pH-dependent, first-order process with a half-life of 15 minutes and 77 minutes at 37°C and 22-25°C, respectively, pH 7.4, to liberate 2 moles of NO per mole of parent compound.^{1,2}

References

- Hrabie, J.A., Klose, J.R., Wink, D.A., *et al.* New nitric oxide-releasing zwitterions derived from polyamines. *J. Org. Chem.* **58**, 1472-1476 (1993).
- Keefer, L.K., Nims, R.W., Davies, K.M., *et al.* 'NONOates' (1-substituted diazen-1-ium-1,2-diolates) as nitric oxide donors: Convenient nitric oxide dosage forms. *Methods Enzymol.* **268**, 281-293 (1996).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/82140

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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