

Product Name: Evofosfamide

Catalog No.: 7507

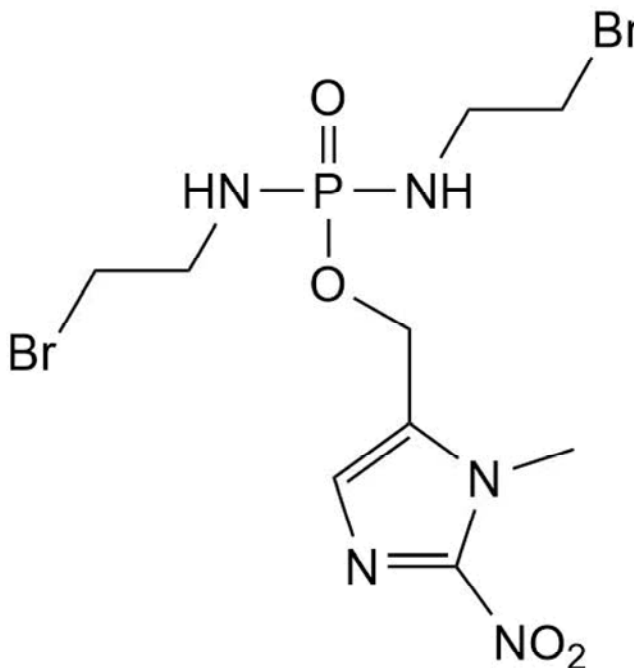
Batch No.: 1

CAS Number: 918633-87-1

IUPAC Name: (1-Methyl-2-nitro-1*H*-imidazol-5-yl)methyl *N,N'*-bis(2-bromoethyl)phosphorodiamidate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₉H₁₆Br₂N₅O₄P.
Batch Molecular Weight: 449.04
Physical Appearance: Beige solid
Solubility: water to 5 mM
DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.3% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	24.07	3.59	15.6
Found	24.13	3.59	15.41

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Evofosfamide is a hypoxia-activated prodrug of the cytotoxin bromo-isophosphoramidate mustard (Br-IPM). Evofosfamide is stable under normoxic conditions but is activated by cellular reductases in hypoxic conditions (IC₅₀ values are 5.1 μM and 0.019 μM, in NSCLC cells under normoxic and hypoxic conditions, respectively). Br-IPM acts as a DNA alkylating agent, inducing intrastrand and interstrand crosslinks. Evofosfamide inhibits NEPC PDX tumor growth by 84.5% in adeno-CRPC and NEPC patient-derived xenograft models. When combined with gemcitabine (Cat. No. 3259), Evofosfamide inhibits primary tumor growth by 96% and significantly extend... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

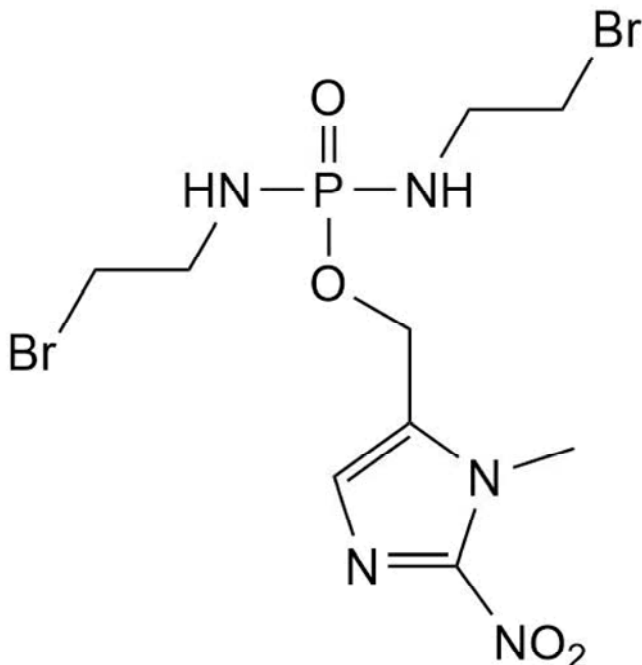
Batch Molecular Formula: C₉H₁₆Br₂N₅O₄P.

Batch Molecular Weight: 449.04

Physical Appearance: Beige solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

water to 5 mM

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Brenner *et al* (2021) Phase 2 trial of hypoxia-activated evofosfamide (TH302) for treatment of recurrent bevacizumab-refractory glioblastoma. *Sci.Rep.* **11** 2306. PMID: 33504881.

Guo *et al* (2019) ONECUT2 is a driver of neuroendocrine prostate cancer. *Nat Commun.* **10** 278. PMID: 30655535.

Quo *et al* (2008) Potent and highly selective hypoxia-activated achiral phosphoramidate mustards as anticancer drugs. *J Med Chem.* **51** 2412. PMID: 18257544.

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