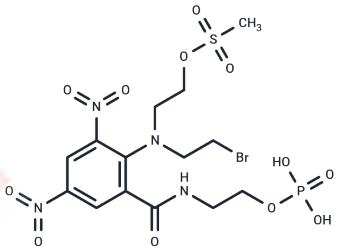
Data Sheet (Cat.No.T36302)

TargetMol

PR-104

Chemical Properties



CAS No. : 851627-62-8

Formula: C14H20BrN4O12PS

Molecular Weight: 579.27

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	PR-104 is a highly specific hypoxia-activated agent that cross-links DNA, enabling its application in various tumor xenograft models. Functioning as a pre-prodrug of nitrogen mustard, PR-104 undergoes efficient conversion to the dinitrobenzamide mustards alcohol form, known as PR-104A[1].
Targets(IC50)	Others,DNA Alkylator/Crosslinker
In vitro	PR-104 demonstrates differential effects under various conditions in SiHa cells, showing enhanced inhibition of radiation-induced DNA single-strand breaks in hypoxic conditions compared to aerobic conditions at a concentration of 80 μM for 1 hour. At a higher concentration of 100 μM for the same duration, it triggers the phosphorylation of Ser139 on histone H2AX. Furthermore, with a dosage of 0.266 mmol/kg over 18 hours, PR-104 exhibits efficacy against hypoxic cells post-irradiation. Its effectiveness varies across cell lines, exhibiting a range in IC50 values from as low as 0.51 μmol/L in H460 cells to as high as 7.3 μmol/L in PC3 prostate cells.
In vivo	PR-104 (0.56 mmol/kg; i.v. or i.p.; 0-2 hours) increases the plasma area under the curve, while PR-104 (0.23 mmol/kg; i.p.; 100 days) demonstrates antitumor activity[1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7263 mL	8.6316 mL	17.2631 mL
5 mM	0.3453 mL	1.7263 mL	3.4526 mL
10 mM	0.1726 mL	0.8632 mL	1.7263 mL
50 mM	0.0345 mL	0.1726 mL	0.3453 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Patterson AV, et al. Mechanism of action and preclinical antitumor activity of the novel hypoxia-activated DNA cross-linking agent PR-104. Clin Cancer Res. 2007;13(13):3922-3932.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481