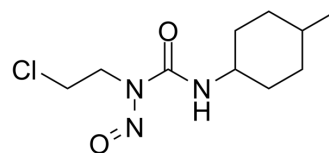


## Semustine

Cat. No.:	HY-13747
CAS No.:	13909-09-6
Molecular Formula:	C <sub>10</sub> H <sub>18</sub> ClN <sub>3</sub> O <sub>2</sub>
Molecular Weight:	247.72
Target:	DNA Alkylator/Crosslinker
Pathway:	Cell Cycle/DNA Damage
Storage:	Powder    -20°C    3 years 4°C        2 years



\* The compound is unstable in solutions, freshly prepared is recommended.

### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 100 mg/mL (403.68 mM; Need ultrasonic)  
Ethanol : 50 mg/mL (201.84 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	4.0368 mL	20.1841 mL	40.3682 mL
	5 mM	0.8074 mL	4.0368 mL	8.0736 mL
	10 mM	0.4037 mL	2.0184 mL	4.0368 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.5 mg/mL (10.09 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (10.09 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (10.09 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Semustine is a DNA alkylator, binds to DNA, and acts as a cancer chemotherapeutic agent<sup>[1]</sup>.

### CUSTOMER VALIDATION

- Biomed Pharmacother. 2023 Apr 25;163:114751.

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See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

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[1]. Agarwal S, et al. Molecular modeling and spectroscopic studies of semustine binding with DNA and its comparison with lomustine-DNA adduct formation. J Biomol Struct Dyn. 2015;33(8):1653-68.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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