Data Sheet (Cat.No.T16871)

TargetMol

Semustine

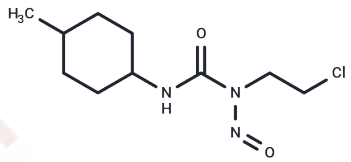
Chemical Properties

CAS No. : 13909-09-6

Formula: C10H18ClN3O2

Molecular Weight: 247.72

Storage: Powder: -20°C for 3 years
Actual storage temperature shall be subject to the COA.



Biological Description

Description	Semustine, a DNA alkylating agent, is a cancer chemotherapy compound that is nephrotoxic in patients with malignant melanoma receiving adjuvant chemotherapy for the adjuvant treatment of leukemia.
Targets(IC50)	DNA Alkylator/Crosslinker
In vivo	Semustine (Me-CCNU) (150 mg×m(-2)×d(-1) once; oral; repeated every 28 days) treatment periods were within 2 - 6 months; follow-up period was 6 months. PFS at 6 months was 55.88% in the Me-CCNU group (P 0.05). Overall survival rates at the end of the follow-up period were 97.30% in the Me-CCNU group (P > 0.05). Adverse events rates of Me-CCNU was 45.15% (P < 0.05).[2]

Solubility Information

Solubility	Ethanol: 45 mg/mL (181.66 mM),Sonication is recommended. DMSO: 90 mg/mL (363.31 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (13.32 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
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
50 mM	0.0807 mL	0.4037 mL	0.8074 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

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.
Sun J, et al. Multicenter randomized controlled study of temozolomide versus semustine in the treatment of recurrent malignant glioma. Zhonghua Yi Xue Za Zhi. 2013;93(3):165-168.
Boice JD Jr, et al. Leukemia and preleukemia after adjuvant treatment of gastrointestinal cancer with semustine (methyl-CCNU). N Engl J Med. 1983;309(18):1079-1084.
Ma X, et al. A randomized phase II study of CEOP with or without semustine as induction chemotherapy in patients with stage IE/IIE extranodal NK/T-cell lymphoma, nasal type in the upper aerodigestive tract. Radiother Oncol. 2009;93(3):492-497.
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):1653-1668.

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