Product Data Sheet

Product Name: Uramustine
Cat. No.: GC37860

Chemical Properties

Cas. No.	66-75-1		
SMILES	O=C1NC(C(N(CCCl)CCCl)=CN1)=O		
Formula	$C_8H_{11}Cl_2N_3O_2$	M.Wt	252.1
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Uramustine		

Protocol

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

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Cell experiment:

The K562 human chronic myeloid leukemia cells are maintained in RPM1 1640 medium supplemented with 10% fetal calf serum and 2 mM glutamine at 37°C in a humidified atmosphere containing 5% CO2 and are incubated with a specified dose of drug for 1 h at 37°C in the dark. The incubation is terminated by centrifugation (5 min, 300 g), and the cells are washed once with drug-free medium. Following the appropriate Uramustine treatment, the cells are transferred to 96-well microtiter plates, with 104 cells per well and 8 wells per sample. Plates are then kept in the dark at 3°C in a humidified atmosphere containing 5% CO2. The assay is based on the ability of viable cells to reduce a yellow soluble tetrazolium salt, MTT to an insoluble purple formazan precipitate. Following incubation of the plates for 4 days (to allow control cells to increase in number by 10-fold), 20 µL of a 5 mg/mL solution of MTT in phosphate-buffered saline is added to each well and the plates are further incubated for 5 h. The plates are then centrifuged for 5 min at 300 g, and the bulk of the medium is pipetted from the cell pellet, leaving 10?20 µL per well. A total of 200 µL of DMSO is added to each well, and the samples are agitated to ensure complete mixing. The optical density is then read at a wavelength of 550 nm on a plate reader, and the dose?response curve is constructed. For each curve, an IC50 value is read as the dose required to reduce the final optical density to 50% of the control value[1].

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References:

[1]. Baraldi PG, et al. Design, synthesis, and biological activity of hybrid compounds between uramustine and DNA minor groove binder distamycin A. J Med Chem. 2002 Aug 15;45(17):3630-3638.

Background

Uramustine is an oral alkylating agent, effective in the treatment of lymphosarcoma, chronic lymphatic leukaemia, and thrombocythemia. DNA Alkylator[1]

Uramustine is an oral alkylating agent, with potent antitumor activity. Uramustine inhibits human chronic myeloid leukaemia K562 cell line, with an IC50 of 5.1 μM.

[1]. Baraldi PG, et al. Design, synthesis, and biological activity of hybrid compounds between uramustine and DNA minor groove binder distamycin A. J Med Chem. 2002 Aug 15;45(17):3630-3638.

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