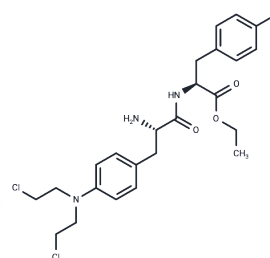


## Melflufen

## Chemical Properties

CAS No. :	380449-51-4
Formula:	C <sub>24</sub> H <sub>30</sub> Cl <sub>2</sub> FN <sub>3</sub> O <sub>3</sub>
Molecular Weight:	498.42
Storage:	Keep away from moisture Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	Melflufen (Melphalan flufenamide), a dipeptide proagent of Melphalan, is an alkylating agent. Melflufen exhibits significant antitumor activity against multiple myeloma (MM) cells and has been shown to inhibit angiogenesis. Melflufen induces irreversible DNA damage and cytotoxicity in MM cells, thereby contributing to its antitumor efficacy. At equivalent molar concentrations, both the salt and free forms of Melflufen exhibit comparable biological activity. However, the salt form, Melflufen hydrochloride, typically demonstrates enhanced water solubility and stability, which may contribute to its increased therapeutic potential.
Targets(IC50)	Apoptosis,Others,DNA Alkylator/Crosslinker
In vitro	<b>Methods:</b> Multiple myeloma cell lines including MM.1S, INA-6, RPMI-8226, MM.1R, Dox-40, ARP-1, and ANBL-6 were treated with Melflufen (0.5-10 μM, 24 hours), and cell viability was assessed via MTT assay. <b>Results:</b> Melflufen demonstrated significant cytotoxicity across all the aforementioned multiple myeloma cell lines.[4]
In vivo	<b>Methods:</b> Melflufen (3 mg/kg, twice weekly for 2 weeks) was administered intravenously to CB-17 SCID mice, and tumor growth and survival were observed. <b>Results:</b> Melflufen significantly inhibited MM tumor growth in vivo and prolonged the survival time of the mice.[4]

### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0063 mL	10.0317 mL	20.0634 mL
5 mM	0.4013 mL	2.0063 mL	4.0127 mL
10 mM	0.2006 mL	1.0032 mL	2.0063 mL
50 mM	0.0401 mL	0.2006 mL	0.4013 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

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Strese S, et al. The novel alkylating prodrug melflufen (J1) inhibits angiogenesis in vitro and in vivo. *Biochem Pharmacol.* 2013 Oct 1;86(7):888-95.

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