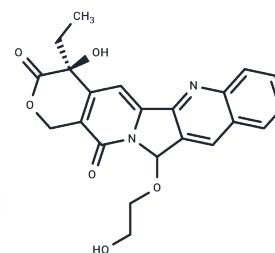


DRF-1042

## Chemical Properties

CAS No. : 200619-13-2  
 Formula: C<sub>22</sub>H<sub>20</sub>N<sub>2</sub>O<sub>6</sub>  
 Molecular Weight: 408.4  
 Storage: Store under nitrogen  
 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	DRF-1042, an orally active camptothecin analog, exhibits anticancer and insecticidal activities by inhibiting DNA topoisomerase I. It has been studied for its efficacy against solid tumors, including prostate and colon cancers.
Targets(IC50)	ADC Cytotoxin, Topoisomerase
In vitro	DRF-1042 displays excellent endostatin stability and good in vitro anticancer activity. It confronts a range of human cancer cell lines including multi-drug resistant (MDR) phenotypes [2].
In vivo	DRF-1042 treatment showed adverse myelosuppressive effects in clone formation assays against mouse, canine and human bone marrow cells. This supports the possibility of extending the dosing schedule in experimental and clinical studies [2].

## Solubility Information

Solubility	DMSO: 30 mg/mL (73.46 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: 2 mg/mL (4.9 mM), Sonication is recommended. <i>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.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.4486 mL	12.2429 mL	24.4858 mL
5 mM	0.4897 mL	2.4486 mL	4.8972 mL
10 mM	0.2449 mL	1.2243 mL	2.4486 mL
50 mM	0.049 mL	0.2449 mL	0.4897 mL

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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

Chatterjee A, et al. Safety, tolerability, and pharmacokinetics of a capsule formulation of DRF-1042, a novel camptothecin analog, in refractory cancer patients in a bridging phase I study. *J Clin Pharmacol.* 2005 Apr;45(4):453-60.

Sriram Rajagopal, et al. Preclinical evaluation of the anticancer activity of DRF-1042, a novel camptothecin analog targeting Topoisomerase-I. Published April 2004.

Upreti VV, et al. Quantitative determination of DRF-1042 in human plasma by HPLC: validation and application in clinical pharmacokinetics. *Biomed Chromatogr.* 2003 Sep;17(6):385-90.

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