

## Darunavir Ethanolate

### Chemical Properties

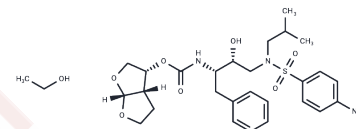
CAS No. : 635728-49-3

Formula: C<sub>29</sub>H<sub>43</sub>N<sub>3</sub>O<sub>8</sub>S

Molecular Weight: 593.74

Storage: Store at low temperature, Keep away from moisture  
 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	Darunavir Ethanolate (UIC 94017) is an HIV PROTEASE INHIBITOR that is used in the treatment of AIDS and HIV INFECTIONS. Due to the emergence of ANTIVIRAL DRUG RESISTANCE when used alone, it is administered in combination with other ANTI-HIV AGENTS.
Targets(IC50)	HIV Protease
In vivo	Darunavir effectively combats both wild-type and protease inhibitor (PI)-resistant HIV strains, boasting an oral bioavailability of 37%. Its efficacy is significantly enhanced when used in conjunction with ritonavir, which raises its bioavailability to 82%[3].

### Solubility Information

Solubility	DMSO: 245 mg/mL (412.64 mM), Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (16.84 mM), Solution. 10% DMSO+90% Saline: < 10 mg/mL (16.84 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. <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	1.6842 mL	8.4212 mL	16.8424 mL
5 mM	0.3368 mL	1.6842 mL	3.3685 mL
10 mM	0.1684 mL	0.8421 mL	1.6842 mL
50 mM	0.0337 mL	0.1684 mL	0.3368 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

Fujimoto H, et al. *Biol Pharm Bull*, 2009, 32(9), 1588-1593.

Molina JM, et al. *Expert Opin Pharmacother*, 2007, 8(12), 1951-1964.

Bhalekar MR, et al. In-vivo bioavailability and lymphatic uptake evaluation of lipid nanoparticulates of darunavir. *Drug Deliv*. 2016 Sep;23(7):2581-2586.

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