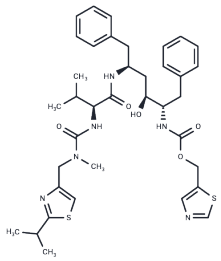
Data Sheet (Cat.No.T1525)

TargetMol

Ritonavir

Chemical Properties



CAS No. : 155213-67-5

Formula: C37H48N6O5S2

Molecular Weight: 720.94

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Ritonavir (ABT 538) is a peptidomimetic agent that inhibits both HIV-1 and HIV-2 proteases. Ritonavir is highly inhibited by serum proteins but boosts the effect of other HIV proteases by blocking their degradation by cytochrome P450.
Targets(IC50)	Apoptosis,HIV Protease,SARS-CoV
In vivo	Ritonavir is a potent inhibitor of CYP3A-mediated biotransformation (terfenadine hydroxylation, IC50 of 0.14 mM; 17alpha-ethynylestradiol 2-hydroxylation, IC50 of 2 mM; nifedipine oxidation, IC50 of 0.07 mM).Ritonavir is a a potent inhibitor of CYP3A4-mediated testicular 6β-hydroxylation (Ki: 19 nM), and also inhibited hydroxylation by toluenesulfonylurea (IC50: 4.2 μM).Ritonavir also inhibited CYP2D6 (IC50: 2.5 mM) and CYP2C9/10 (IC50: 8.0 mM)-mediated responses.Ritonavir Ritonavir increased the cellular activity of uninfected human PBMC cultures.Ritonavir inhibited p-glycoprotein-mediated saquinavir solubilization (IC50: 0.2 μM), suggesting that Ritonavir has a high affinity for p-glycoprotein.Ritonavir significantly inhibited the metabolism of human hepatic microsomes ABT-378 (Ki: 13 nM). Ritonavir binding to ABT-378 (in 3:1 and 29:1 ratios) was able to inhibit CYP3A (IC50: 1.1 and 4.6 μM). In cultures of uninfected human PBMCs, Ritonavir significantly reduced the susceptibility of PBMCs to apoptosis (associated with low levels of caspase-1 expression), decreased caspase-3 activity, and reduced membrane-bound protein staining. Ritonavir inhibited the induction of tumor necrosis factor produced by PBMCs and monocytes at nontoxic concentrations in a time- and dose-dependent manner.

Solubility Information

Solubility	DMSO: 50 mg/mL (69.35 mM),Heating is recommended. Ethanol: 7.2 mg/mL (9.99 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.3871 mL	6.9354 mL	13.8708 mL
5 mM	0.2774 mL	1.3871 mL	2.7742 mL
10 mM	0.1387 mL	0.6935 mL	1.3871 mL
50 mM	0.0277 mL	0.1387 mL	0.2774 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.

Reference

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