Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Ritonavir

Catalog No: tcsc0432

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Size: 500mg

Specifications

CAS No:
155213-67-5

Formula:
$C_{37}H_{48}N_6O_5S_2$

Pathway:
Metabolic Enzyme/Protease;Anti-infection

Target:
HIV Protease;HIV

Purity / Grade:
>98%

Solubility:
H2O :

Alternative Names:
ABT 538;RTV

Observed Molecular Weight:
720.94

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Product Description

Ritonavir is an inhibitor of **HIV protease** used to treat HIV infection and AIDS.

In Vitro: Ritonavir is an inhibitor of CYP3A4 mediated testosterone 6β-hydroxylation with mean K_i of 19 nM and also inhibits tolbutamide hydroxylation with IC_{50} of 4.2 μM[1]. Ritonavir is found to be a potent inhibitor of CYP3A-mediated biotransformations (nifedipine oxidation with IC_{50} of 0.07 mM, 17alpha-ethynylestradiol 2-hydroxylation with IC_{50} of 2 mM; terfenadine hydroxylation with IC_{50} of 0.14 mM). Ritonavir is also an inhibitor of the reactions mediated by CYP2D6 (IC_{50}=2.5 mM) and CYP2C9/10 (IC_{50}=8.0 mM)[2]. Ritonavir results in an increase in cell viability in uninfected human PBMC cultures. Ritonavir markedly decreases the susceptibility of PBMCs to apoptosis correlated with lower levels of caspase-1 expression, decreases in annexin V staining, and reduces caspase-3 activity in uninfected human PBMC cultures. Ritonavir inhibits induction of tumor necrosis factor (TNF) production by PBMCs and monocytes in a time- and dose-dependent manner at nontoxic concentrations[3]. Ritonavir inhibits p-glycoprotein-mediated extrusion of saquinavir with an IC_{50} of 0.2 μM, indicating a high affinity of ritonavir for p-glycoprotein[4]. Ritonavir inhibits human liver microsomal metabolism of ABT-378 potently with K_i of 13 nM. Ritonavir combined with ABT-378 (at 3:1 and 29:1 ratios) inhibits CYP3A (IC_{50}=1.1 and 4.6 μM), albeit less potently than Ritonavir (IC_{50}=0.14 μM)[5].