



LKT Laboratories, Inc.

Ritonavir

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Product Information

Product ID R3577

CAS No. 155213-67-5

Chemical Name

Synonym Norvir, A-84538, ABT-538, NSC693184, RTV

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

Formula Wt. 720.95

Melting Point 120-123 °C

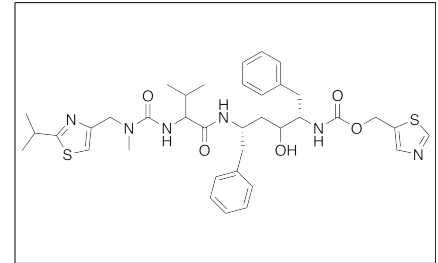
Purity ≥98%

Solubility DMSO to 10 mg/mL, Ethanol
to 3 mg/mL, Methanol

Store Temp Ambient

Ship Temp Ambient

Description Ritonavir is an HIV protease inhibitor that is commonly used as a component of highly active anti-retroviral therapy (HAART) in the treatment of HIV infection. Ritonavir exhibits antiviral, anti-angiogenic, neuroprotective, and hyperlipidemic activities. Ritonavir inhibits expression of VEGF and HIF-1 α , decreasing proliferation in retinal epithelial cells and indicating potential use as a treatment for ocular diseases. Ritonavir also inhibits translocation of apoptosis-inducing factor (AIF), activates caspase 9, and inhibits permeability alterations in the mitochondrial membrane potential, preventing apoptosis in retinal photoreceptor cells and macrophages. This compound decreases levels of sarco/endoplasmic reticulum Ca²⁺-ATPase (SERCA) and intracellular Ca²⁺, increasing endoplasmic reticular stress and injury. Additionally, ritonavir increases levels of IL-6 and decreases levels of adiponectin, GLUT4, and fatty acid synthase, inhibiting lipogenesis and increasing lipodystrophy; this compound also increases levels of VLDL.



Bulk quantities available upon request

Product ID	Size
R3577	100 mg
R3577	250 mg
R3577	1 g

References Vadlapatla RK, Vadlapudi AD, Pal D, et al. Ritonavir inhibits HIF-1 α -mediated VEGF expression in retinal pigment epithelial cells in vitro. *Eye (Lond)*. 2013 Nov 8. [Epub ahead of print]. PMID: 24202050.

Kao E, Shinohara M, Feng M, et al. Human immunodeficiency virus protease inhibitors modulate Ca²⁺ homeostasis and potentiate alcoholic stress and injury in mice and primary mouse and human hepatocytes. *Hepatology*. 2012 Aug;56(2):594-604. PMID: 22407670.

Hisatomi T, Nakazawa T, Noda K, et al. HIV protease inhibitors provide neuroprotection through inhibition of mitochondrial apoptosis in mice. *J Clin Invest*. 2008 Jun;118(6):2025-38. PMID: 18497877.

Grigem S, Fischer-Posovszky P, Debatin KM, et al. The effect of the HIV protease inhibitor ritonavir on proliferation, differentiation, lipogenesis, gene expression and apoptosis of human preadipocytes and adipocytes. *Horm Metab Res*. 2005 Oct;37(10):602-9. PMID: 16278782.

Riddle TM, Schildmeyer NM, Phan C, et al. The HIV protease inhibitor ritonavir increases lipoprotein production and has no effect on lipoprotein clearance in mice. *J Lipid Res*. 2002 Sep;43(9):1458-63. PMID: 12235177.

Beach JW. Chemotherapeutic agents for human immunodeficiency virus infection: mechanism of action, pharmacokinetics, metabolism, and adverse reactions. *Clin Ther*. 1998 Jan-Feb;20(1):2-25. PMID: 9522101.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.