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-1α, 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 reticulum 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.

References


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.


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