

Product Information

Product ID E9819
CAS No. 163222-33-1
Chemical Name

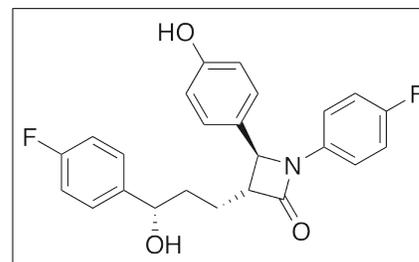
Synonym

Formula $C_{24}H_{21}F_2NO_3$
Formula Wt. 409.43
Melting Point 164-166 °C
Purity ≥99%
Solubility

Store Temp Ambient

Ship Temp Ambient

Description Ezetimibe is an inhibitor of Niemann-Pick-like C1-type 1 (NPC1L1) protein, a cholesterol transport protein, resulting in inhibition of intestinal cholesterol transport and decreases in LDL levels. Ezetimibe exhibits anti-hyperlipidemic, anti-atherosclerotic, anti-diabetic, nephroprotective, and hepatoprotective activities. In hepatocytes, ezetimibe decreases mTORC1 activity and increases autophagy, decreasing free cholesterol in the plasma membrane. In other in vitro models, ezetimibe inhibits expression of intracellular adhesion molecule 1 (ICAM-1) and CD11A/B, phosphorylation of ERK, and activation of NF-κB, decreasing adhesion of THP-1 cells and preventing them from differentiating into macrophage-like cells. In animal models of diabetes, this compound normalizes adiponectin levels, decreases plasma and hepatic lipids, and improves glomerular hypertrophy. Additionally, ezetimibe decreases generation of ROS, downregulates expression of skp2 and CDC20, and inhibits degradation of microsomal triglyceride transfer protein (MTP), improving fibrosis and steatosis in animal models of nonalcoholic fatty liver disease.



Bulk quantities available upon request

Product ID	Size
E9819	25 mg
E9819	100 mg
E9819	250 mg

References

- Yamamura T, Ohsaki Y, Suzuki M, et al. Inhibition of NPC1L1 by ezetimibe activates autophagy in human hepatocyte and reduces mutant α1-antitrypsin Z deposition. *Hepatology*. 2013 Nov 9. [Epub ahead of print]. PMID: 24214142.
- Wang X, Sugimoto K, Fujisawa T, et al. Novel effect of ezetimibe to inhibit the development of non-alcoholic fatty liver disease in Fatty Liver Shionogi mouse. *Hepatol Res*. 2014 Jan;44(1):102-13. PMID: 23510093.
- Muñoz-Pacheco P, Ortega-Hernández A, Miana M, et al. Ezetimibe inhibits PMA-induced monocyte/macrophage differentiation by altering microRNA expression: a novel anti-atherosclerotic mechanism. *Pharmacol Res*. 2012 Dec;66(6):536-43. PMID: 22989505.
- Phan BA, Dayspring TD, Toth PP. Ezetimibe therapy: mechanism of action and clinical update. *Vasc Health Risk Manag*. 2012;8:415-27. PMID: 22910633.
- Garcia-Calvo M, Lisnock J, Bull HG, et al. The target of ezetimibe is Niemann-Pick C1-Like 1 (NPC1L1). *Proc Natl Acad Sci U S A*. 2005 Jun 7;102(23):8132-7. PMID: 15928087.

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