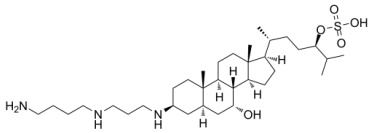
Data Sheet

Product Name:	Squalamine
Cat. No.:	CS-4045
CAS No.:	148717-90-2
Molecular Formula:	C34H65N3O5S
Molecular Weight:	627.96
Target:	Bacterial; HBV
Pathway:	Anti-infection
Solubility:	DMSO : 100 mg/mL (159.25 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

Squalamine(MSI-1256) is an aminosterol compound with potent broad spectrum antiviral activity. IC50 value: Target: in vitro: squalamine can strongly displace membrane-bound cationic proteins such as Rac1, a ρ-GTPase recruited to the inner leaflet of the eukaryotic cytoplasmic membrane for the actin remodeling necessary for endocytosis. At concentrations between 20 and 60 μg/mL, squalamine has been shown to inhibit a broad array of growth factor-induced, actin-dependent responses in endothelial cells, including cell migration, cell division, and vascular tube formation in a 3D matrix [1]. Squalamine effectively inhibited HBV replication in human primary hepatocytes when added either during the initial exposure of virus to the cells or at 24 h after infection. A similar study was performed to evaluate the effect of squalamine on the replication of HDV. Squalamine was introduced at 20 μg/mL during HDV exposure, and the effects were measured at day 7 when total RNA was extracted and assayed for HDV RNA sequences [1]. in vivo: one time daily treatment with squalamine (15 or 30 mg/kg per d s.c.) was started beginning on day 1 or 2 after viral administration and continuing until day 8 or 9, respectively. Survival was monitored, and animals that remained alive by day 21 were considered cured [1].

PROTOCOL (Extracted from published papers and Only for reference)

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3179074/bin/supp_108_38_15978__index.html

References:

[1]. Zasloff M, et al. Squalamine as a broad-spectrum systemic antiviral agent with therapeutic potential. Proc Natl Acad Sci U S A. 2011 Sep 20;108(38):15978-83.

[2]. Hraiech S, et al. Antibacterial efficacy of inhaled squalamine in a rat model of chronic Pseudomonas aeruginosa pneumonia. J Antimicrob Chemother. 2012 Oct;67(10):2452-8.

[3]. Djouhri-Bouktab L, et al. Squalamine ointment for Staphylococcus aureus skin decolonization in a mouse model. J Antimicrob Chemother. 2011 Jun;66(6):1306-10.

CAIndexNames:

Cholestane-7,24-diol, 3-[[3-[(4-aminobutyl)amino]propyl]amino]-, 24-(hydrogen sulfate), (3β,5α,7α,24R)-

SMILES:

C[C@@]12[C@](C[C@@H](O)[C@]3([H])[C@]2([H])CC[C@@]4(C)[C@@]3([H])CC[C@]4([H])[C@@H](CC[C@H](C(C)C)OS(=O)(O)=O)C)([H])C[C@@H](NCCCN

Caution: Product has not been fully validated for medical applications. For research use only.

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