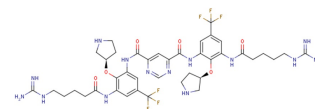


Brilacidin

Chemical Properties

CAS No.:	1224095-98-0
Formula:	C40H50F6N14O6
Molecular Weight:	936.91
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



Biological Description

Description	Brilacidin is a nonpeptidic anti-infective in a new class of defensin mimetics used for the research of eye infections.
Targets(IC ₅₀)	Others: None
In vitro	Brilacidin is more potent for Gram-positive bacteria (except SV) than Gram-negative bacteria. Brilacidin acts primarily on the bacterial cell membrane by depolarization. Brilacidin has Gram-positive in vitro activity; topical Brilacidin 0.5% is minimally irritating; and Brilacidin 0.5% was equally efficacious as Vancomycin (VAN) in a methicillin-resistant <i>S. aureus</i> (MRSA) keratitis model when the corneal epithelium is removed. Both <i>Staphylococcus aureus</i> (SA) and <i>Staphylococcus epidermidis</i> (SE) have the lowest minimum inhibitory concentrations among the bacterial groups. The MIC90s to Brilacidin for <i>Streptococcus pneumoniae</i> (SP), <i>Streptococcus viridians</i> (SV), <i>Moraxella</i> (MS), <i>Haemophilus influenza</i> (HI), <i>Pseudomonas aeruginosa</i> (PA), and <i>Serratia marcescens</i> (SM) are 4, 32, 256, 32, 16, and 128-fold higher, respectively than SA and SE.
In vivo	Brilacidin (0.5) is determined to be Nonirritating based on their Maximum mean total scores (MMTS) values. Brilacidin 1% is determined to be Mildly Irritating (23.0), Brilacidin 0.5% (6.5), and Brilacidin 0.25% (4.0) are determined to be Minimally Irritating, while Brilacidin 0.1% (2.0) and TBS (1.0) are determined to be Practically Nonirritating and 0.01%. Brilacidin demonstrates dose-dependent ocular toxicity after 7 topical instillations (every 30 min for 3 h) in the NZW rabbit ocular toxicity model.

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.067 mL	5.337 mL	10.673 mL
5 mM	0.213 mL	1.067 mL	2.135 mL
10 mM	0.107 mL	0.534 mL	1.067 mL
50 mM	0.021 mL	0.107 mL	0.213 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Kowalski RP, et al. An Independent Evaluation of a Novel Peptide Mimetic, Brilacidin (PMX30063), for Ocular Anti-infective. J Ocul Pharmacol Ther. 2016 Jan-Feb;32(1):23-7.

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