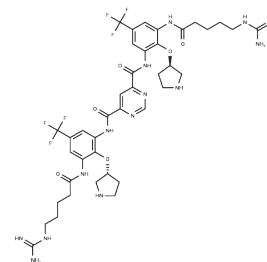


Brilacidin

Chemical Properties

CAS No. :	1224095-98-0
Formula:	C40H50F6N14O6
Molecular Weight:	936.91
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Brilacidin is a nonpeptidic anti-infective in a new class of defensin mimetics used for the research of eye infections.
Targets(IC50)	Others,Antibacterial,Antibiotic
In vitro	Brilacidin demonstrates higher potency against Gram-positive bacteria (except SV) than against Gram-negative bacteria, attributing its antibacterial efficacy primarily to bacterial cell membrane depolarization. It exhibits notable in vitro activity against Gram-positive strains, and a 0.5% topical formulation shows minimal irritation. Moreover, in a methicillin-resistant <i>S. aureus</i> (MRSA) keratitis model, where the corneal epithelium was removed, 0.5% Brilacidin achieved efficacy comparable to Vancomycin (VAN). <i>Staphylococcus aureus</i> (SA) and <i>Staphylococcus epidermidis</i> (SE) display the lowest minimum inhibitory concentrations (MICs) among the tested bacterial groups. The MIC90s for Brilacidin against <i>Streptococcus pneumonia</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 significantly higher, being 4, 32, 256, 32, 16, and 128 times respectively, compared to SA and SE.
In vivo	Brilacidin at different concentrations exhibits varying levels of ocular irritancy in the NZW rabbit model when applied topically seven times at 30-minute intervals over three hours. Specifically, Brilacidin at a concentration of 1% is mildly irritating with a maximum mean total score (MMTS) of 23.0. Concentrations of 0.5% (MMTS 6.5) and 0.25% (MMTS 4.0) are minimally irritating, while 0.1% (MMTS 2.0) and TBS (MMTS 1.0) are practically nonirritating. This data suggests a dose-dependent relationship between Brilacidin concentration and ocular toxicity.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.0673 mL	5.3367 mL	10.6734 mL
5 mM	0.2135 mL	1.0673 mL	2.1347 mL
10 mM	0.1067 mL	0.5337 mL	1.0673 mL
50 mM	0.0213 mL	0.1067 mL	0.2135 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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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