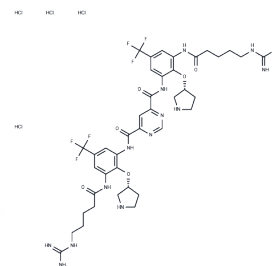


Brilacidin tetrahydrochloride

Chemical Properties

CAS No. :	1224095-99-1
Formula:	C40H54Cl4F6N14O6
Molecular Weight:	1082.75
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 tetrahydrochloride (PMX 30063 tetrahydrochloride) is a defensin mimetic antibiotic exhibiting potent antimicrobial activity against various bacteria, with MIC90 values of 1 µg/mL for Streptococcus pneumoniae, 8 µg/mL for Streptococcus viridans and Haemophilus influenzae, and 4 µg/mL for Pseudomonas aeruginosa.
Targets(IC50)	Others,Antibacterial,Antibiotic
In vitro	Both Staphylococcus aureus (SA) and Staphylococcus epidermidis (SE) exhibit the lowest minimum inhibitory concentrations (MIC) among the bacterial groups studied. The MIC90s for Brilacidin against Streptococcus pneumonia (SP), Streptococcus viridians (SV), Moraxella (MS), Haemophilus influenza (HI), Pseudomonas aeruginosa (PA), and Serratia marcescens (SM) are 4, 32, 256, 32, 16, and 128 times higher, respectively, than those for SA and SE. Brilacidin demonstrates significant in vitro activity against Gram-positive bacteria (excluding SV) but is considerably less effective against Gram-negative bacteria. Topically applied 0.5% Brilacidin solution is minimally irritating and was found to be as effective as Vancomycin (VAN) in a methicillin-resistant S. aureus (MRSA) keratitis model, particularly when the corneal epithelium had been removed. The mechanism of action for Brilacidin involves depolarization of the bacterial cell membrane, highlighting its potent antibacterial properties against Gram-positive strains.
In vivo	In the NZW rabbit ocular toxicity model, Brilacidin exhibits dose-dependent ocular toxicity following seven topical applications every 30 minutes over a three-hour period. A 1% concentration of Brilacidin is classified as 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 deemed Minimally Irritating. In contrast, a 0.1% solution of Brilacidin, with an MMTS of 2.0, and TBS with an MMTS of 1.0, are categorized as Practically Nonirritating. Moreover, a 0.01% concentration of Brilacidin, showing an MMTS of 0.5, is identified as Nonirritating.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.9236 mL	4.6179 mL	9.2357 mL
5 mM	0.1847 mL	0.9236 mL	1.8471 mL
10 mM	0.0924 mL	0.4618 mL	0.9236 mL
50 mM	0.0185 mL	0.0924 mL	0.1847 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

Bruk Mensa , et al. Comparative Mechanistic Studies of Brilacidin, Daptomycin, and the Antimicrobial Peptide LL16. *Antimicrob Agents Chemother.* 2014 Sep;58(9):5136-45.

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

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481