Data Sheet (Cat.No.TP4266)

TargetMol

WLBU2 acetate

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Keep away from moisture
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	WLBU2 acetate is an engineered cationic antimicrobial peptide (eCAP) designed to overcome the sensitivity issues of natural antimicrobial peptides (AMPs) in various environments. It exhibits rapid bactericidal activity with minimum inhibitory concentrations (MIC) of ≤10 μM against numerous Gram-positive and Gram-negative bacteria, including methicillin-resistant Staphylococcus aureus, vancomycin-resistant enterococci, Klebsiella pneumoniae, Enterobacter aerogenes, Enterobacter cloacae, and Escherichia coli. WLBU2 acetate effectively inhibits biofilm growth of Pseudomonas aeruginosa and remains active in conditions rich in mucus, low pH, and high salt concentrations, without adverse effects on human respiratory epithelial cells. This compound is applicable for research related to cystic fibrosis (CF) and Pseudomonas aeruginosa infections.
In vitro	WLBU2 acetate, at concentrations ranging from 5-90 μM for 24 hours on non-living surfaces and 10-100 μM for 5 hours on cystic fibrosis airway epithelial cells (CFAECs), inhibits biofilm formation of Pseudomonas aeruginosa on abiotic surfaces and CFAECs. Even in high-salt (100 mM NaCl) and low pH (6.5-7.0) environments, WLBU2 (50 μM, 5 hours) acetate maintains its biofilm prevention activity in CFAECs. When combined with Tobramycin, ciprofloxacin, Ceftazidime, and Meropenem, WLBU2 (20 μM, 5 hours) acetate shows synergistic effects in CFAECs, but not with Colistin. The minimal inhibitory concentration (MIC) of WLBU2 acetate against Klebsiella pneumoniae is 7.943 μM, and against Acinetobacter baumannii clinical isolates is 7.484 μM, with the minimum bactericidal concentration (MBC) matching the MIC for these bacterial strains, indicating bactericidal activity.

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