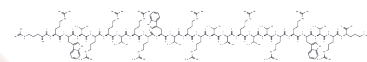


WLBU2

Chemical Properties

CAS No. : 847061-43-2
 Formula: C151H260N66O25
 Molecular Weight: 3400.11
 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 is an engineered cationic antimicrobial peptide (eCAP) designed to overcome the sensitivity issues of natural antimicrobial peptides (AMPs) in various environments. WLBU2 exhibits rapid bactericidal activity and has a minimum inhibitory concentration (MIC) value of $\leq 10 \mu\text{M}$ against numerous Gram-positive and Gram-negative bacteria, including methicillin-resistant <i>Staphylococcus aureus</i> , vancomycin-resistant Enterococci, <i>Klebsiella pneumoniae</i> , <i>Enterobacter aerogenes</i> , <i>Enterobacter cloacae</i> , and <i>Escherichia coli</i> . It effectively prevents biofilm formation by <i>Pseudomonas aeruginosa</i> and retains its activity in mucus-rich, low pH, and high salt conditions, without adverse effects on human respiratory epithelial cells. Additionally, WLBU2 is applicable for studying cystic fibrosis (CF) and <i>Pseudomonas aeruginosa</i> infections. |
| Targets(IC50) | Antibacterial |
| In vitro | WLBU2 inhibits biofilm formation of <i>Pseudomonas aeruginosa</i> on non-biological surfaces and human cystic fibrosis airway epithelial cells (CFAECs) at concentrations of 5-90 μM for 24 hours on abiotic surfaces and 10-100 μM for 5 hours on CFAECs. At a concentration of 50 μM for 5 hours, it retains biofilm prevention efficacy in environments with high salt (100 mM NaCl) and low pH (6.5-7.0). When used at 20 μM for 5 hours in CFAECs, WLBU2 shows a synergistic effect with Tobramycin, Ciprofloxacin, Ceftazidime, and Meropenem, but not with Colistin. The MIC of WLBU2 for <i>Klebsiella pneumoniae</i> is 7.943 μM , and for clinical isolates of <i>Acinetobacter baumannii</i> , it is 7.484 μM . Additionally, the MBC values for bacterial isolates are the same as their MIC values, suggesting its bactericidal properties. |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|------------|------------|-------------|
| 1 mM | 0.2941 mL | 1.4705 mL | 2.9411 mL |
| 5 mM | 0.0588 mL | 0.2941 mL | 0.5882 mL |
| 10 mM | 0.0294 mL | 0.1471 mL | 0.2941 mL |
| 50 mM | 0.0059 mL | 0.0294 mL | 0.0588 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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

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