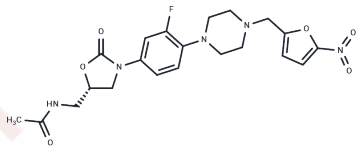
# Data Sheet (Cat.No.T211882)

TargetMol

## Ranbezolid

### Chemical Properties



CAS No. : 392659-38-0

Formula: C21H24FN5O6

Molecular Weight: 461.44

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 | Ranbezolid (RBx7644 free base) is an orally active oxazolidinone antibiotic effective against both Gram-positive and Gram-negative anaerobic bacteria, including Staphylococcus aureus, Staphylococcus epidermidis, and Bacteroides fragilis. It inhibits the 50s ribosomal subunit, with an IC50 value of 17 μM for bacterial ribosomes, and disrupts cell wall and lipid synthesis. Ranbezolid acts as a rapid bactericidal agent, significantly reducing bacterial load, and demonstrates improved cardiovascular safety. It is applicable in the study of antibiotics targeting anaerobic bacteria. |
| Targets(IC50) | Antibacterial,Antibiotic |
| In vitro | Ranbezolid (1 μg/mL) effectively inhibits protein synthesis in Staphylococcus aureus and Staphylococcus epidermidis, while also impeding cell wall and lipid synthesis in Staphylococcus epidermidis. At concentrations between 1-8 μg/mL, Ranbezolid causes concentration-dependent membrane damage to Staphylococcus epidermidis. The compound's IC50 for bacterial ribosomes is 17 μM, with a safety index of 865. Its minimum inhibitory concentrations (MIC) against the bacteria Bacteroides fragilis, Bacteroides vulgatus, Bacteroides thetaiotaomicron, Clostridium perfringens, Clostridioides difficile, and Peptoniphilus magnus are 0.06, 0.015, 0.06, 0.06, 0.03, and 0.015 μg/mL, respectively. |
| In vivo | Ranbezoild (100 mg/kg, p.o., administered twice daily for 5 days) demonstrates excellent in vivo activity against Bacteroides fragilis in a mouse infection model. In a rat spontaneous hypertension model, Ranbezoild (≤ 50 mg/kg, p.o., single dose) does not significantly enhance the pressor response induced by Tyramine. |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.1671 mL | 10.8356 mL | 21.6713 mL |
| 5 mM | 0.4334 mL | 2.1671 mL | 4.3343 mL |
| 10 mM | 0.2167 mL | 1.0836 mL | 2.1671 mL |
| 50 mM | 0.0433 mL | 0.2167 mL | 0.4334 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.