
Product Data Sheet

Product Name: RNPA1000

Cat. No.: GC32273

Chemical Properties

Cas. No. 359600-10-5

SMILES O=C(O)C1=CC=C(N2C(C)=C(/C=C(C#N)/C(NC3=CC=CC(Br)=C3)=O)C=C2C)C=C1Formula $C_{23}H_{18}BrN_3O_3$ M.Wt 464.31

Solubility DMSO : 50 mg/mL (107.69 mM; Need ultrasonic) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

Background

RNPA1000 is an attractive antimicrobial development candidate; RnpA inhibitor. IC50 value: Target: RnpA inhibitor. The antibiotic vancomycin and a novel Staphylococcus aureus RnpA inhibitor under pre-clinical development, RNPA1000, were included in these studies. Rheological testing characterized the workability of the glass polyalkenoate cement over a range of powder-to-liquid ratios and polyacrylic acid concentrations and revealed that the most suitable powder-to-liquid ratio was 2/1.25 with 40 wt% polyacrylic acid. Loading glass polyalkenoate cement with either 20-30% RNPA1000 or vancomycin prevented bacterial growth. However, longer incubations allowed for Staphylococcus aureus colonies to form near the vancomycin-infused cement, indicating that vancomycin may not be suitable for long-term biofilm inhibition in comparison to RNPA1000.

[1]. Eidem TM, et al. Drug-eluting cements for hard tissue repair: a comparative study using vancomycin and RNPA1000 to inhibit growth of Staphylococcus aureus. J Biomater Appl. 2014 Apr;28(8):1235-46. [2]. Eidem TM, et al. Small-molecule inhibitors of Staphylococcus aureus RnpA-mediated RNA turnover and tRNA processing. Antimicrob Agents Chemother. 2015 Apr;59(4):2016-28.

Caution: Product has not been fully validated for medical applications. For research use only.

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