

Product Data Sheet

Product Name: Robenidine hydrochloride

Cat. No.: GC32106

Chemical Properties

Cas. No. 25875-50-7

SMILES N=C(N/N=C/C1=CC=C(C(Cl)C=C1)N/N=C/C2=CC=C(C(Cl)C=C2)[H]Cl

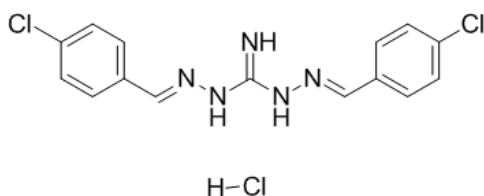
Formula $C_{15}H_{14}Cl_3N_5$ M.Wt 370.66

Solubility DMSO : ≥ 30 mg/mL (80.94 mM) 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



Protocol

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Cell experiment: MRSA clinical isolates are used in this study and the MIC₅₀ for Robenidine (compound 1) is determined using a modified MIC assay. The antimicrobial dilutions of Robenidine are completed in 100% DMSO, with 2 µL added to each well. The assay is performed in a total volume of 200 µL in 96-well plates. Robenidine is tested in final concentrations of 0.7 to 345.3 µM. Plates are incubated for 20 to 24 h at 37°C before determination of the MIC[1].

Animal experiment: The rabbits are divided into four groups (n=8, each group). The rabbits in the control group are fed anticoccidial-free rations throughout the study. Rabbits in the other group are fed rations containing Robenidine (ROB) (66 ppm) for 20 consecutive days. At the end of the 20th day of feeding, a single dose of Florfenicol (FFC) is injected intravenously at 25 mg/kg body weight (b.w.) into the left auricular vein of each rabbit in all groups. Blood (approximately 1 mL) samples are collected into heparin-coated tubes from the right auricular vein of each rabbit at 5, 10, 15, 30, and 45 min and 1, 1.5, 2, 4, 6, 8, and 12 h after administration of FFC. The plasma is harvested after centrifugation at 3,000 g for 10 min and stored at -20°C until analysis[2].

References:

- [1]. Abraham RJ, et al. Robenidine Analogues as Gram-Positive Antibacterial Agents. J Med Chem. 2016 Mar 10;59(5):2126-38.
- [2]. Liu C, et al. Influence of three coccidiostats on the pharmacokinetics of florfenicol in rabbits. Exp Anim. 2015;64(1):73-9.

Background

Robenidine hydrochloride is an anticoccidial agent which is also active against MRSA and VRE with MIC₅₀s of 8.1 and 4.7 µM, respectively.

Robenidine (compound 1) inhibits the growth of MRSA and VRE with MIC values of 8.1 and 4.7 µM, respectively. Robenidine is bactericidal against all of the S. aureus strains tested with MBC/MIC₉₀

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

ratios ≤ 2 . A profound and negative impact on the MIC values with a 4-fold decrease with Robenidine at 2% serum and no activity at 50% serum is observed[1].

The time that the mean plasma concentration exceeds the concentration of 1 $\mu\text{g/mL}$ is approximately 6 h in the Florfenicol (FFC) alone group; however, it is lowered to 4 h by Robenidine (ROB) pretreatment. The terminal elimination half-life ($t_{1/2z}$), area under the concentration-time curve (AUC), area under the first moment curve (AUMC), and mean residence time (MRT) significantly decreased, whereas the elimination rate constant (λ_z) and total body clearance (CL_z) obviously increased in rabbits pretreated with Robenidine[2].

[1]. Abraham RJ, et al. Robenidine Analogues as Gram-Positive Antibacterial Agents. J Med Chem. 2016 Mar 10;59(5):2126-38. [2]. Liu C, et al. Influence of three coccidiostats on the pharmacokinetics of florfenicol in rabbits. Exp Anim. 2015;64(1):73-9.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA