Product Data Sheet

Product Name: DuP 105
Cat. No.: GC32267

Chemical Properties

Cas. No.	96800-41-8		
SMILES	CC(NC[C@H]1CN(C2=CC=C(S(C)=O)C=C2)C(O1)=O)=O		
Formula	$C_{13}H_{16}N_2O_4S$	M.Wt	296.34
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	DuP 105		

Protocol

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Animal experiment:

The mice are made neutropenic by the intraperitoneal administration of 100 mg of cyclophosphamide per kg on days -5, -3, and 0 (the day of infection). The extent of immunosuppression is assessed by using a standard hematological technique to determine leukocyte counts. In all experiments, the leukocyte count in the cyclophosphamide-treated mice is less than 15% of that in nontreated mice from day 0 through day 7. On day 0, the mice are injected intraperitoneally with a bacterial inoculum suspended in 0.2 mL of saline containing 5% gastric porcine mucin. This inoculum (2×104 CFU) is fivefold that required to kill all the nontreated immunosuppressed mice in 48 h. Graded doses of the test compounds are administered by the subcutaneous or oral route at 1 and 4 h after infection. In parallel with the immunosuppressed mice, groups of nonimmunosuppressed mice are infected, and treated with the antibacterial drugs. The number of survivors on day 7 in each group is used to calculate the ED50 values of the test compounds.

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References:

[1]. Slee AM, et al. Oxazolidinones, a new class of synthetic antibacterial agents: in vitro and in vivo activities of DuP 105 and DuP 721. Antimicrob Agents Chemother. 1987 Nov;31(11):1791-7.
[2]. Barry AL, et al. In vitro evaluation of DuP 105 and DuP 721, two new oxazolidinone antimicrobial agents. Antimicrob Agents Chemother. 1988 Jan;32(1):150-2.

Background

DuP 105 is an orally active oxazolidinone, a new class of synthetic antimicrobial agent with activity against gram-positive bacteria.

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DuP 105 shows inhibitory activities against staphylococcal isolates and B. fragilis isolates with MIC90s of 4 to 16 μg/mL and 16 μg/mL[1]. DuP 105 MICs for 50% of the 216 gram-positive isolates tested (MIC50s) range from 4.0 to 16 μg/mL[2].

DuP 105 administered by either the oral or the parenteral route is protective against staphylococcal and streptococcal infections in mice with the 50% effective doses of 9 to 23 mg/kg[1].

[1]. Slee AM, et al. Oxazolidinones, a new class of synthetic antibacterial agents: in vitro and in vivo activities of DuP 105 and DuP 721. Antimicrob Agents Chemother. 1987 Nov;31(11):1791-7. [2]. Barry AL, et al. In vitro evaluation of DuP 105 and DuP 721, two new oxazolidinone antimicrobial agents. Antimicrob Agents Chemother. 1988 Jan;32(1):150-2.

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