

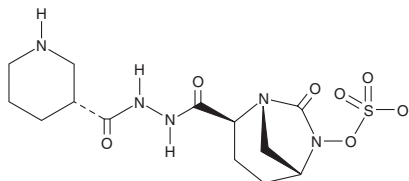
PRODUCT INFORMATION



Zidebactam

Item No. 30701

CAS Registry No.: 1436861-97-0
Formal Name: (1R,2S,5R)-7-oxo-6-(sulfooxy)-2-[2-
[(3R)-3-piperidinylcarbonyl]hydrazide],
1,6-diazabicyclo[3.2.1]octane-2-carboxylic acid
Synonym: WCK-5107
MF: $C_{13}H_{21}N_5O_7S$
FW: 391.4
Purity: $\geq 95\%$
Supplied as: A solid
Storage: -20°C
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Zidebactam is supplied as a solid. A stock solution may be made by dissolving the zidebactam in water. We do not recommend storing the aqueous solution for more than one day.

Description

Zidebactam is a penicillin-binding protein 2 (PBP2) inhibitor and β -lactam antibiotic enhancer.¹ It inhibits *P. aeruginosa* PBP2 ($IC_{50} = 0.26 \mu\text{g/ml}$) and is selective for PBP2 over PBP1a, -1b, -3, -4, and -5/6 (IC_{50} s = $>4 \mu\text{g/ml}$ for all). Zidebactam enhances the bactericidal activity of cefepime (Item No. 23633) against multidrug-resistant strains of *P. aeruginosa*, as well as against *E. coli*, *Klebsiella*, *Enterobacter*, *S. marcescens*, and *A. baumannii*.² *In vivo*, zidebactam enhances cefepime-induced reductions in bacterial loads in mouse models of *K. pneumoniae*-induced peritonitis and thigh infection.³ Formulations containing zidebactam in combination with cefepime have been used in the treatment of various bacterial infections.

References

1. Moya, B., Barcelo, I.M., Bhagwat, S., *et al.* WCK 5107 (zidebactam) and WCK 5153 are novel inhibitors of PBP2 showing potent " β -lactam enhancer" activity against *Pseudomonas aeruginosa*, including multidrug-resistant metallo- β -lactamase-producing high-risk clones. *Antimicrob. Agents Chemother.* **61**(6), e02529-16 (2017).
2. Sader, H.S., Rhomberg, P.R., Flamm, R.K., *et al.* WCK 5222 (cefepime/zidebactam) antimicrobial activity tested against Gram-negative organisms producing clinically relevant β -lactamases. *J. Antimicrob. Chemother.* **72**(6), 1696-1703 (2017).
3. Moya, B., Barcelo, I.M., Cabot, G., *et al.* *In vitro* and *in vivo* activities of β -lactams in combination with the novel β -lactam enhancers zidebactam and WCK 5153 against multidrug-resistant metallo- β -lactamase-producing *Klebsiella pneumoniae*. *Antimicrob. Agents Chemother.* **63**(5), e00128-19 (2019).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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