

CEFTAZIDIME AVIBACTAM

Trade Name	ZAVICEFTA® (Pfizer)																
Class	Extended spectrum, beta lactamase resistant, cephalosporin antibiotic																
Mechanism of Action	Inhibits bacterial cell wall synthesis and thereby causing bacterial lysis.																
Indications Individual ID approval required for full treatment course	Treatment of resistant gram negative infections caused by pathogens such as E Coli, H Influenza, Neisseria, Klebsiella and Proteus species																
Contraindications	Known sensitivity to cephalosporins. Caution in patients with Type 1 hypersensitivity to penicillin Caution in patients with renal impairment, consider lengthening the dosing interval.																
Supplied As	2.5g vial of powder for injection																
Dilution Caution 2 step dilution process	<p>IV: Note concentrations and doses in this profile refer to <u>total drug ceftazidime + avibactam</u></p> <p>Step 1. Add 8 mL of water for injection to the vial</p> <table border="1"> <thead> <tr> <th>Vial</th> <th>Water Added</th> <th>Volume</th> <th>Concentration</th> </tr> </thead> <tbody> <tr> <td>2.5g</td> <td>8 mL</td> <td>10 mL*</td> <td>250mg /mL</td> </tr> </tbody> </table> <p>* Displacement value of the ceftazidime avibactam powder is approximately 2mL</p> <p>Step 2. Take 1 mL (250mg) of the solution in Step 1 and add 9 mL of either sodium chloride 0.9% or glucose 5%</p> <table border="1"> <thead> <tr> <th>Drug</th> <th>Sodium Chloride 0.9% or Glucose 5%</th> <th>Final Volume</th> <th>Final Concentration</th> </tr> </thead> <tbody> <tr> <td>1 mL (250 mg)</td> <td>9 mL</td> <td>10 mL</td> <td>25 mg /mL ceftazidime + avibactam</td> </tr> </tbody> </table>	Vial	Water Added	Volume	Concentration	2.5g	8 mL	10 mL*	250mg /mL	Drug	Sodium Chloride 0.9% or Glucose 5%	Final Volume	Final Concentration	1 mL (250 mg)	9 mL	10 mL	25 mg /mL ceftazidime + avibactam
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Drug	Sodium Chloride 0.9% or Glucose 5%	Final Volume	Final Concentration														
1 mL (250 mg)	9 mL	10 mL	25 mg /mL ceftazidime + avibactam														
Dose¹	25mg/kg (= ceftazidime 20mg/kg + avibactam 5 mg)																
Interval	Every 8 hours																
Administration	IV infusion over 2 hours																
Compatible With...	Solution: glucose 5%, sodium chloride 0.45% and 0.9% (Note compatibility of ceftazidime -avibactam has not been tested in other strengths of glucose or sodium chloride)																

... Compatible With	Y-site: dexmedetomidine, dopamine, ertapenem, furosemide, gentamicin, heparin, imipenem cilastatin, linezolid, magnesium sulphate, meropenem, noradrenaline, phenylephrine, potassium chloride, sodium bicarbonate, tobramycin, vasopressin, vecuronium.
Incompatible With	Vancomycin There is no information on compatibility with TPN or SMOF lipid, please use a separate line if at all possible.
Interactions	Potential for increased risk of nephrotoxicity if given in combination with other nephrotoxic meds eg furosemide, gentamicin or vancomycin.
Monitoring	Monitor electrolytes (sodium and potassium)
Stability	Discard remaining solution in vial after reconstitution. Use a new vial for each dose. Vials are not designed for multi-dosing. Protect vial from light.
Storage	Unopened vials should be stored at room temperature < 30°C
Adverse Reactions	Rare: (1-10%) candidiasis, diarrhoea, hypokalaemia, increased transaminases, infusion site phlebitis, pyrexia, itch, rash, thrombocytopenia, vomiting.
Metabolism	Widely distributed throughout the body 80-90% excreted unchanged in urine Half-life: 1 -2 hours.
Comments	This antibiotic is usually only prescribed in the presence of multi-resistant drug organisms and on the recommendation of the infectious disease consultant.
References	<ol style="list-style-type: none"> 1. Neofax in www.micromedexsolutions.com 2. Zavicefta data sheet www.medsafe.govt.nz 3. Trissells IV compatibility data in www.micromedexsolutions.com
Updated By	A Lynn, B Robertshawe June 2024