

CEFTOLOZANE TAZOBACTAM

Trade Name	Zerbraxa® (Merck Sharp & Dome)																		
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 infections caused by the organisms such as Escherichia coli, Klebsiella oxytoca, Klebsiella pneumoniae, Proteus mirabilis, Pseudomonas aeruginosa, Bacteroides fragilis, Streptococcus anginosus, Streptococcus constellatus and Streptococcus salivarium																		
Contraindications	Hypersensitivity to ceftolozane, tazobactam, piperacillin/tazobactam or other beta-lactams																		
Supplied As	1.5 g 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 ceftolozane + tazobactam</u></p> <p>Step 1. Add 8.6mL 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>1.5 g</td> <td>8.6 mL</td> <td>10 mL*</td> <td>150 mg/mL</td> </tr> </tbody> </table> <p>*Displacement value of ceftolozane tazobactam is approximately 1.4mL</p> <p>Step 2. Take 1 mL (150mg) of the solution in step 1 and add 9 mL of either glucose 5% or sodium chloride 0.9%</p> <table border="1"> <thead> <tr> <th>Drug</th> <th>Glucose 0.5% or Sodium Chloride 0.9%</th> <th>Final Volume</th> <th>Final Concentration</th> </tr> </thead> <tbody> <tr> <td>1 mL (150mg)</td> <td>9 mL</td> <td>10 mL</td> <td>15 mg/mL</td> </tr> </tbody> </table>			Vial	Water added	Volume	Concentration	1.5 g	8.6 mL	10 mL*	150 mg/mL	Drug	Glucose 0.5% or Sodium Chloride 0.9%	Final Volume	Final Concentration	1 mL (150mg)	9 mL	10 mL	15 mg/mL
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1 mL (150mg)	9 mL	10 mL	15 mg/mL																
Dosage	30mg/kg/dose																		
Interval	Eight hourly																		
Administration	IV infusion over 60 minutes																		

Compatible With	<p>Solution: glucose 5%, sodium chloride 0.9% (There is no information on compatibility with any other solutions)</p> <p>Y-site: adrenaline, amikacin, amiodarone, azathioprine, aztreonam, benzylpenicillin, calcium chloride, calcium gluconate, cefazolin, cefepime, ceftaroline, ceftazidime, ceftriaxone, cefuroxime, ciprofloxacin, daptomycin, dexamethasone, dexmedetomidine, digoxin, diltiazem, diphenhydramine, dobutamine, dopamine, ephedrine, ertapenem, famotidine, fentanyl, filgrastim, fosfomicin, furosemide, gentamicin, heparin, hydrocortisone, imipenem cilastatin*, insulin, labetalol, lidocaine, linezolid, magnesium sulphate, meropenem, methylprednisolone, metoclopramide, metronidazole, midazolam, milrinone, morphine, naloxone, noradrenaline, octreotide, ondansetron, pantoprazole, phenylephrine, piperacillin tazobactam, potassium chloride, ranitidine, rocuronium, sodium bicarbonate, sodium nitroprusside, sodium phosphate, tacrolimus, tobramycin, vancomycin*, vasopressin, vercuronium</p> <p>*variable compatibility reported with imipenem cilastatin, methylprednisolone and vancomycin use a separate line if possible</p>
Incompatible With	<p>Albumin, amphotericin B, caspofungin, ciclosporin, phenytoin, propofol</p> <p>There is no information on compatibility of ceftazidime avibactam with TPN or SMOF lipid, please use a separate line if at all possible.</p>
Interactions	Unknown
Monitoring	Routine monitoring of electrolytes and renal function
Stability	Discard any unused solution immediately after use
Storage	Store unopened vials in the fridge at 2 – 8 °C, Protect from light
Adverse Reactions	Abdominal pain, diarrhoea, vomiting, anaemia, thrombocytosis, hypokalaemia, increased transaminases, phlebitis, pyrexia
Metabolism	<p>90% renally cleared</p> <p>Half life approximately 3 hours</p>
Comments	This antibiotic is usually only prescribed in the presence of multi-resistant drug organisms and on the recommendation of the infectious diseases' consultant.
References	<ol style="list-style-type: none"> 1. Neofax in www.micromedexsolutions.com 2. Zerbraxa data sheet www.medsafe.govt.nz 3. Trissells IV compatibility data in www.micromedexsolutions.com
Updated By	A Lynn, B Robertshawe June 2024