

Product Name:	Cefditoren pivoxil
Product Number:	C050
CAS Number:	117467-28-4
Molecular Formula:	$C_{25}H_{28}N_6O_7S_3$
Molecular Weight:	620.72 g/mol
Form:	Powder
Appearance:	Light yellow or off-white crystalline powder
Water Content (Karl Fischer):	≤1.5%
Optical Rotation:	-45° - -52°
Storage Conditions:	-20°C
Description:	<p>Cefditoren pivoxil is a third generation cephalosporin antibiotic.</p> <p>TOKU-E offers three forms of cefditoren: <u>cefditoren (C100)</u>, <u>cefditoren sodium (C094)</u>, and cefditoren pivoxil (C050). Cefditoren sodium is soluble in aqueous solution, and cefditoren pivoxil is soluble in fat.</p>
Mechanism of Action:	<p>Like β-lactams, cephalosporins interfere with PBP (penicillin binding protein) activity involved in the final phase of peptidoglycan synthesis. PBP's are enzymes which catalyze a pentaglycine crosslink between alanine and lysine residues providing additional strength to the cell wall. Without a pentaglycine crosslink, the integrity of the cell wall is severely compromised and ultimately leads to cell lysis and death. Resistance to cephalosporins is commonly due to cells containing plasmid encoded β-lactamases.</p>
Spectrum:	<p>Cefditoren is a broad spectrum antibiotic commonly used against bacteria responsible for community acquired pneumonia and pharyngitis</p>
Microbiology Applications	<p>Cefditoren pivoxil can be used to study antibiotic effects against group A <i>Streptococcus</i> and other microbes responsible for pharyngitis.</p>
References:	<p>Poveda, J. L., et al. "Cefditoren Pivoxil: A New Oral Cephalosporin for Skin, Soft Tissue and Respiratory Tract Infections." <i>Medline</i> 19.3 (n.d.): 231-46. www.ncbi.gov. Web. 27 Aug. 2012.</p> <p>Georgopapadakou, N. H. "Mechanisms of Action of Cephalosporin 3'-quinolone Esters, Carbamates, and Tertiary Amines in Escherichia Coli." <i>American Society for Microbiology</i> 37.3 (1992): 559-65. <i>Antimicrobial Agents and Chemotherapy</i>. Web. 21 Aug. 2012.</p>