Product Name: Cefradine
Product Number: C057
CAS Number: 38821-53-3
Molecular Formula: C₁₆H₁₉N₃O₄S•H₂O
Molecular Weight: 349.40
Form: Powder
Appearance: White to yellowish crystalline powder
Source: Semi-synthetic
Water Content (Karl Fisher): ≤6.0%
pH: 3.5-6.0
Optical Rotation: +80° to +90°
Storage Conditions: -20°C

Description: Cefradine (also known as cephradine) is a first generation cephalosporin antibiotic which has a similar anti-bacterial spectrum of activity to cefalexin. Cefradine is freely soluble in aqueous solution at 21.3 mg/mL.

Mechanism of Action: 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.