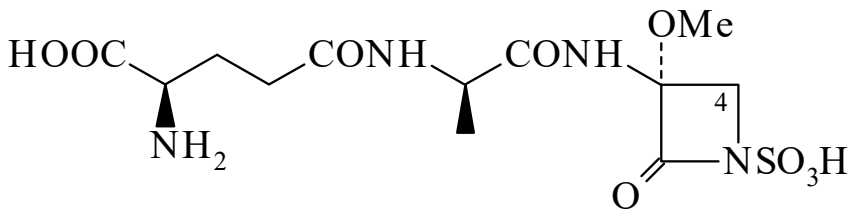
>>**Entry Name: Sulfazecin**
Synonym(s): G 6302. SQ 26445. EM 5210. Antibiotic G 6302. Antibiotic SQ 26445. Antibiotic EM 5210



CAS Registry Number: 77912-79-9
Related CAS Registry Numbers(s): 79194-40-4 79720-09-5

Molecular Formula: $C_{12}H_{20}N_4O_9S$
Molecular Weight: 396.377
Accurate Mass: 396.095101
Percentage Composition: C 36.36%; H 5.09%; N 14.13%; O 36.33%; S 8.09%

Biological Source: Obt. from *Pseudomonas acidophila* and *Gluconobacter* sp.
Use/Importance: Active against gram-negative bacteria
Physical Description: Needles
Melting Point: Mp 168-170 dec.°
Optical Rotation: $[\alpha]_D^{25}$+82 (c, 1.0 in H_2O)
Solubility: Sol. H_2O
pKa Value: pK_{a1} 3.4; pK_{a2} 9.2 (NH_2)
UV: [neutral] λ_{max} 0 (end) (ε) (H_2O) (Derep)

>>**Derivative:** Na salt

CAS Registry Number: 80734-22-1
Optical Rotation: $[\alpha]_D^{25}$+85 (c, 0.37 in H_2O)
Solubility: Sol. H_2O

>>**Derivative:** Stereoisomer
Synonym(s): Isosulfazecin

CAS Registry Number: 77900-75-5

Molecular Formula: $C_{12}H_{20}N_4O_9S$
Molecular Weight: 396.377
Accurate Mass: 396.095101
Percentage Composition: C 36.36%; H 5.09%; N 14.13%; O 36.33%; S 8.09%
Biological Source: From *Pseudomonas mesoacidophila*
Use/Importance: Weakly active against gram-positive and -negative bacteria, strongly active against mutants hypersensitive to β-lactam antibiotics
Physical Description: Needles
Optical Rotation: $[\alpha]_D^{25}$+4.5 (c, 1.01 in H_2O)
Solubility: Insol. EtOH, EtOAc, $CHCl_3$; BERDY SOL: Sol. H_2O, MeOH, DMSO; fairly sol. EtOH, Me_2CO, Py; poorly sol. EtOAc, hexane
UV: [neutral] λ_{max} (H_2O) (Berdy)
Hazard & Toxicity: BERDY HAZD : LD_{50} (mus, ivn) 10000 mg/kg

References:

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Imada, A. *et al.*, *Nature (London)*, 1981, **289**, 590, *(isol)*
Sykes, R.B. *et al.*, *Nature (London)*, 1981, **291**, 489, *(isol)*
O'Sullivan, J. *et al.*, *Antimicrob. Agents Chemother.*, 1983, **23**, 598, *(biosynth)*
Matsuo, T. *et al.*, *Chem. Pharm. Bull.*, 1983, **31**, 2200, *(synth)*

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