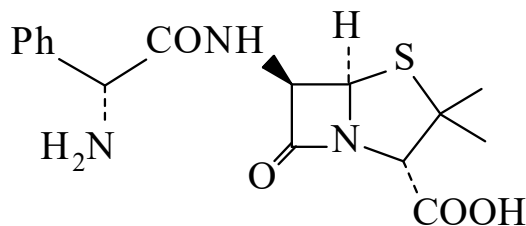




>>Entry Name: Ampicillin, BAN, INN, JAN, USAN

ENTRY UNDER REVIEW

Synonym(s): 6-[(Aminophenylacetyl)amino]-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 9CI. D- α -Aminobenzylpenicillin. 6-(α -Aminophenylacetamido)penicillanic acid. Vidocillin. AY 6108. BRL 1341. NSC 528986. Vicilline. Penbritin. Penbristol. Penicline. Omnipen. Binotal. Amblosin. Tolomol. Amfipen



CAS Registry Number: 69-53-4

Related CAS Registry Numbers(s): 94935-63-4

Extra CAS Registry Numbers(s): 7177-48-2

Molecular Formula: C₁₆H₁₉N₃O₄S

Molecular Weight: 349.41

Accurate Mass: 349.109627

Percentage Composition: C 55.00%; H 5.48%; N 12.03%; O 18.32%; S 9.18%

General Statement: Semisynthetic penicillin

Use/Importance: Orally absorbed antibiotic active against gram-positive and -negative bacteria

Development Status: Worldwide 92nd best selling prescription drug (as Unasyn in combination with [DLL07-N](#)) (\$0.33 bn) (Pfizer) (1996, PharmaBusiness)

Melting Point: Mp 199-202 dec.°

Optical Rotation: [α]_D²³+287.9 (H₂O)

pKa Value: pK_{a1} 2.52; pK_{a2} 7.24 (25°)

Calculated Log P Data: Log P -1.27 (uncertain value) (calc)

Other Data: Constit. of Unasyn

Hazard & Toxicity: Hypersensitivity reactions reported when used therapeutically. LD₅₀ (rat, ipr) 4500 mg/kg. Exp. teratogen

Aldrich: 27186-1

Fluka: 10047

Sigma: A9393

>>Derivative: Na salt

Synonym(s): Ampicillin sodium, USAN. Omnipen. Embacillin C

CAS Registry Number: 69-52-3

Hazard & Toxicity: LD₅₀ (mus, ipr) 3480 mg/kg

Aldrich: 27188-8

Fluka: 10044

Sigma: A0797

>>Derivative: (5-Methyl-2-oxo-1,3-dioxol-4-yl)methyl ester

see Lenampicillin, [GXF88-V](#)

References:

- Doyle, F. *et al.*, *J.C.S.*, 1962, 1440, (*synth*)
Austin, K. *et al.*, *Nature (London)*, 1965, **208**, 99
Ivashkiv, E., *Anal. Profiles Drug Subst.*, 1973, **2**, 1, (*rev*)
Boles, M. *et al.*, *Acta Cryst. B*, 1976, **32**, 2279; 1978, **34**, 461, (*cryst struct*)
Kaifež, F. *et al.*, *J. Het. Chem.*, 1976, **13**, 561, (*synth*)
Bird, A.E. *et al.*, *J.C.S. Perkin I*, 1982, 563, (*pmr, cd*)
Akita, H. *et al.*, *Chem. Pharm. Bull.*, 1984, **32**, 4317, (*synth*)
Humber, D.C. *et al.*, *Tetrahedron*, 1984, **40**, 4153, (*synth*)
Cooper, J. *et al.*, *Tetrahedron*, 1984, **40**, 4153, (*synth*)
Negwer, M., *Organic-Chemical Drugs and their Synonyms*, 6th edn., Akademie-Verlag, 1987, 4026, (*synonyms*)
IARC Monog., 1990, **50**, 153, (*rev, tox*)
Kirk-Othmer Encycl. Chem. Technol., 4th edn., Wiley, 1991, **3**, 129, (*rev*)
Martindale, The Extra Pharmacopoeia, 30th edn., Pharmaceutical Press, 1993, 116
Ang, C.Y.W. *et al.*, *J. Agric. Food Chem.*, 1997, **45**, 4351-4356, (*occur, anal*)
Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, AIV500; SEQ000; AOD125