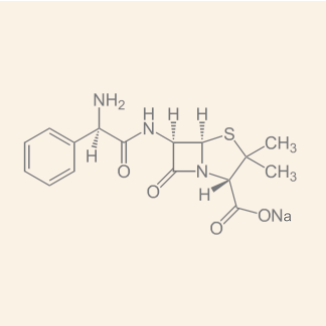
Ampicillin, Sodium Salt

Molecular structure



Product Description

Ampicillin is a semi-synthetic penicillin. Antibiotics of the class penicillins are derivatives of 6-aminopenicillanic acid consisting of a ß-lactam ring linked to a thiazolidine ring and a side chain. This nucleus is from the condensation of the amino acids L-cysteine and D-valine. The function of penicillins is to inhibit protein synthesis through activity associated with the ß-lactam ring. Spectra are dependent on the side chain of individual congeners. The ß-lactam blocks transpeptidation through association with the penicillin-binding proteins (PBPs).

These antibiotics are analogs of the substrate, D-alanyl-D-alanine, whose bond is normally broken to form the cross-bridge glycines in transpeptidation. This analog competes for the binding of PBPs. As a result, no cross-bridges are formed and the cell wall becomes weak and eventually ruptures.

Penicillins are inactive against cells with previously made cell walls. They work only against the synthesis of new cell walls and are, as a result, bacteriocidal to actively growing cells.

Because the activity of the antibiotic is derived from the ß-lactam ring, ß-lactamases (enzymes that destroy the ß-lactam ring) confer resistance to the antibiotic thereby enabling the cell to grow in the presence of the antibiotic.

Product Specification

Molecular weight:	371.4 g/mol
Formula:	C16H18N3O4SNa
Synonyms:	D[-]-α-aminobenzylpenicillin
Storage and Stability:	2°C to -8°C

Life Science Production, a Division of Life Science Group Ltd.
Tel: +44 (0) 1234 889180; Email: sales@lifesciencegroup.co.uk
Web: www.lifescienceproduction.co.uk

Ordering information

Cat. No.	Description	Unit Size	Qty/Pk
61-238-RH	Ampicillin, Sodium salt, powder Ampicillin, Sodium salt, powder	10 g	1
61-238-RM		100 g	1

For Research use only. Not approved for human or veterinary use, for application to humans or animals, or for use in clinical or *in vitro* procedures.

Support

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To learn more, contact us:
Telephone: +44 (0) 1234 889180
Email: sales@lifesciencegroup.co.uk
Website: www.lifescienceproduction.co.uk
Address: PO Box 1519, Bedford, United Kingdom