

# Ampicillin (164-12-2): sc-57622

## BACKGROUND

$\beta$ -lactam antibiotics encompass a broad class of bactericidal agents that contain a  $\beta$ -lactam ring in their structure. These antibiotics represent the most widely used group of antibiotics. Amoxicillin is a  $\beta$ -lactam penicillin derivative that specifically inhibits cross-linkage between the linear peptidoglycan polymer chains that make up a major component of the cell wall of bacteria, thereby leading to cell lysis. Ampicillin is commonly used to treat urinary tract infections, otitis media, uncomplicated community-acquired pneumonia, *Haemophilus influenzae*, salmonellosis and Listeria meningitis. Ampicillin is also a useful research tool and is often used in molecular biology as a test for the uptake of genes into plasmids by bacteria.

## REFERENCES

1. Di Stefano, R., Scopelliti, M., Pellerito, C., Fiore, T., Vitturi, R., Colomba, M.S., Gianguzza, P., Stocco, G.C., Consiglio, M. and Pellerito, L. 2002. Organometa complexes with Amoxicillin and Ampicillin. *J. Inorg. Biochem.* 89: 279-292.
2. Hosaka, Y., Okamoto, R., Irinoda, K., Kaieda, S., Koizumi, W., Saigenji, K. and Inoue, M. 2002. *Helicobacter pylori* may survive Ampicillin treatment in the remnant stomach. *J. Antibiot.* 55: 495-498.
3. Sendo, T., Teshima, D., Makino, K., Mishima, K., Itoh, Y. and Oishi, R. 2002. Application of dynamic laser scattering to the quality control of injectable drugs: polymer formation in Ampicillin solution. *J. Clin. Pharm. Ther.* 27: 79-84.
4. Bartzatt, R. and Malesa, C. 2003. Synthesis, structural analysis and anti-bacterial activity of a butyl ester derivative of Ampicillin. *Chemotherapy* 49: 213-221.
5. Gavalda, J., Onrubia, P.L., Gómez, M.T., Gomis, X., Ramírez, J.L., Len, O., Rodríguez, D., Crespo, M., Ruíz, I. and Pahissa, A. 2003. Efficacy of Ampicillin of experimental endocarditis due to *Enterococcus faecalis* with no high-level resistance to aminoglycosides. *J. Antimicrob. Chemother.* 52: 514-517.
6. Brittain, H.G. 2005. Solid-state fluorescence of the trihydrate phases of Ampicillin and Amoxicillin. *AAPS PharmSciTech* 6: E444-448.
7. Fernández-Varón, E., Cárceles, C.M., Espuny, A., Marín, P. and Escudero, E. 2005. Pharmacokinetics of a combination preparation of Ampicillin and sulbactam in turkeys. *Am. J. Vet. Res.* 65: 1658-1663.
8. Metzidie, E., Manolis, E.N., Pournaras, S., Sofianou, D. and Tsakris, A. 2005. Spread of an unusual penicillin- and imipenem-resistant but Ampicillin-susceptible phenotype among *Enterococcus faecalis* clinical isolates. *J. Antimicrob. Chemother.* 57: 158-160.
9. Xu, C., Lin, X., Ren, H., Zhang, Y., Wang, S. and Peng, X. 2006. Analysis of outer membrane proteome of *Escherichia coli* related to resistance to Ampicillin and tetracycline. *Proteomics* 6: 462-473.

## SOURCE

Ampicillin (164-12-2) is a mouse monoclonal antibody raised against Ampicillin conjugated to BSA via carboxyl group.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Ampicillin (164-12-2) is recommended for detection of Ampicillin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.