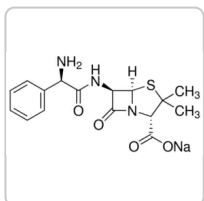


Type in Product Names, Product Numbers, or CAS Numbers to see suggestions.



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Documents

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[🔍 COO/COA](#)

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A9518 [▶ Sigma-Aldrich®](#)

Ampicillin sodium salt

★★★★★ 5.0 (1)

Synonym(s):

D-(-)-α-Aminobenzylpenicillin sodium salt

Empirical Formula (Hill Notation):

C₁₆H₁₈N₃NaO₄S

CAS Number: **69-52-3**

Molecular Weight: 371.39

Beilstein: 4119211

EC Number: **200-708-1**

MDL number: **MFCD00064313**

PubChem Substance ID: **24891463**

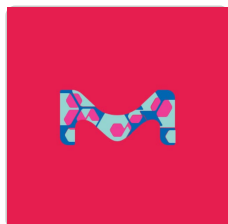
NACRES: NA.76

SKU	Pack Size	Availability	Price	Quantity
A9518-5G	5 G	✓ Available to ship on October 10, 2022 Details...	€39.00	<input type="text" value="—"/> <input type="text" value="+"/> i
A9518-25G	25 G	✓ Available to ship on October 10, 2022 Details...	€148.00	<input type="text" value="—"/> <input type="text" value="+"/> i
A9518-100G	100 G	✓ Only 4 left in stock (more on the way) Details...	€502.00	<input type="text" value="—"/> <input type="text" value="+"/> i

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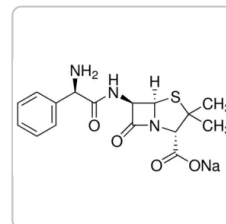
RECOMMENDED PRODUCTS



Sigma-Aldrich

A5354**Ampicillin**

Ready Made Solution, 100 mg/mL, 0.2 µm filtered

[View Price and Availability](#)

Sigma-Aldrich

A0166**Ampicillin sodium salt**

powder or crystals, BioReagent, suitable for cell culture

[View Price and Availability](#)

PROPERTIES

form powder

Quality Level **200**

color white to slight yellow

mp 215 °C (dec.) (lit.)

solubility H₂O: 50 mg/mL

antibiotic activity spectrum
Gram-negative bacteria
Gram-positive bacteria

application(s)	agriculture
Mode of action	cell wall synthesis interferes
storage temp.	2-8°C
SMILES string	[Na+].CC1(C)SC2[C@H](NC(=O)[C@H](N)c3ccccc3)C(=O)N2[C@H]1C([O-])=O
InChI	1S/C16H19N3O4S.Na/c1-16(2)11(15(22)23)19-13(21)10(14(19)24-16)18-12(20)9(17)8-6-4-3-5-7-8;/h3-7,9-11,14H,17H2,1-2H3,(H,18,20)(H,22,23);/q;+1/p-1/t9-,10-,11+,14-;/m1./s1
InChI key	KLOHDWPABZXLGI-YWUHCJSESA-M

Looking for similar products? Visit [Product Comparison Guide](#)

Related Categories

[Antibiotics](#)

DESCRIPTION

General description

Chemical structure: β -lactam

Packaging

5, 25, 100 g in in glass bottle

Application

Used to select for ampicillin resistance in mutated and transformed cells.

Biochem/physiol Actions

Mode of Action: This is a β -lactam antibiotic that inhibits bacterial cell-wall synthesis by inactivating transpeptidases on the inner surface of the bacterial cell membrane.

Mode of Resistance: Administration with β -lactamase cleaves the β -lactam ring of Ampicillin and inactivates it.

Antimicrobial Spectrum: Includes both gram-positive (similar to benzylpenicillin) and gram-negative bacteria (similar to tetracyclines and chloramphenicol).

Caution

This product has been reported stable as supplied at 25°C at 43% and 81% relative humidity for six weeks. Additional studies have shown that the stability of Ampicillin in solution is a function of pH, temperature and the identity of the buffer. Its activity is quickly lost when stored above pH 7. Optimal storage conditions are suggested as 2-8°C, and pH 3.8-5 where its activity was retained at 90%+ for a week.

Preparation Note

Ampicillin is reported as slightly soluble in water, practically insoluble in alcohol, chloroform, ether and fixed oils but soluble in dilute acids or bases. The solution should not be autoclaved; a stock solution should be sterilized through filtration and stored frozen, where it will be stable for months.

Other Notes

Keep container tightly closed in a dry and well-ventilated place. Storage class (TRGS 510): Non Combustible Solids

RELATED PRODUCTS

Related Product

08168

Timestrip Plus™ 8 °C

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SAFETY INFORMATION

Pictograms



GHS08

Signal Word

Danger

Hazard Statements

H317 - H334

Precautionary Statements

P261 - P280 - P342 + P311

Hazard Classifications

Resp. Sens. 1 - Skin Sens. 1

Storage Class Code

13 - Non Combustible Solids

WGK

WGK 2

Flash Point(F)

Not applicable

Flash Point(C)

Not applicable

Personal Protective Equipment

dust mask type N95 (US),

Eyeshields, Gloves

DOCUMENTATION

Certificate of Analysis

Enter Lot Number to search for Certificate of Analysis (COA).

Lot Number

e.g. 023J5431

How to enter Lot Number (COA)

Search

Certificate of Origin

Enter Lot Number to search for Certificate of Origin (COO).

Lot Number

e.g. 023J5431

How to enter Lot Number (COO)

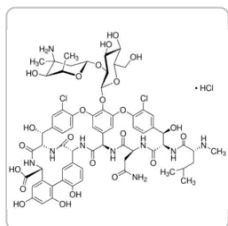
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[Structure Search](#)

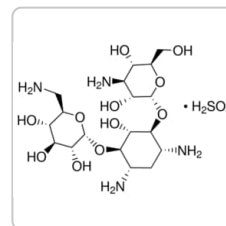
CUSTOMERS ALSO VIEWED



Sigma-Aldrich

V2002**Vancomycin hydrochloride from *Streptomyces orientalis***

≥900 µg per mg (as vancomycin base)

[View Price and Availability](#)

Sigma-Aldrich

K1377**Kanamycin sulfate from *Streptomyces kanamyceticus***

powder, BioReagent, suitable for cell culture, suitable for plant cell culture

[View Price and Availability](#)

FREQUENTLY ASKED QUESTIONS

Which document(s) contains shelf-life or expiration date information for a given product?

If available for a given product, the recommended re-test date or the expiration date can be found on the Certificate of Analysis.

What is the solubility of Product A9518, Ampicillin sodium salt?

This product is soluble in water at a concentration of 50 mg/mL, producing a clear, colorless to faint yellow solution.

Is Ampicillin product stable in solution?

We recommend using freshly prepared solutions. A concentrated solution of sodium ampicillin in water (approximately 330 mg/mL) may be expected to lose about 10% potency in 20 hours at -20°C.

How do I use Ampicillin in agar plates?

For plates, add ampicillin to autoclaved media cooled to 48°C, to a final concentration of 35-50 µg/mL. Pour the plates, and allow them to cool completely. Plates may be stored at 2-8°C for up to only 1-2 weeks before use.

How do I get lot-specific information or a Certificate of Analysis?

The lot specific COA document can be found by entering the lot number above under the "Documents" section.

How do I find price and availability?

There are several ways to find pricing and availability for our products. Once you log onto our website, you will find the price and availability displayed on the product detail page. You can contact any of our Customer Sales and Service offices to receive a quote. USA customers: 1-800-325-3010 or view [local office numbers](#).

What is the Department of Transportation shipping information for this product?

Transportation information can be found in Section 14 of the product's (M)SDS. To access the shipping information for this material, use the link on the product detail page for the product.

My question is not addressed here, how can I contact Technical Service for assistance?

Ask a Scientist [here](#).

PEER REVIEWED PAPERS

Do Antibiotics Potentiate Proteases in Hemotoxic Snake Venoms?

Christoffer V Sørensen et al.
Toxins, 12(4) (2020-04-15)

Antibiotics are often administered with antivenom following snakebite envenomings in order to avoid secondary bacterial infections. However, to this date, no studies have evaluated whether antibiotics may have undesirable potentiating effects on snake venom. Herein, we demonstrate that four commonly

Antibiotic Treatment Prior to Injury Improves Post-Traumatic Osteoarthritis Outcomes in Mice.

Melanie E Mendez et al.*International journal of molecular sciences*, 21(17) (2020-09-10)

Osteoarthritis (OA) is a painful and debilitating disease characterized by the chronic and progressive degradation of articular cartilage. Post-traumatic OA (PTOA) is a secondary form of OA that develops in ~50% of cases of severe articular injury. Inflammation and re-occurring

Biofilm Bacteria Use Stress Responses to Detect and Respond to Competitors.

Bram Lories et al.*Current biology : CB*, 30(7), 1231-1244 (2020-02-23)

Bacteria use complex regulatory networks to cope with stress, but the function of these networks in natural habitats is poorly understood. The competition sensing hypothesis states that bacterial stress response systems can serve to detect ecological competition, but studying regulatory

CombiANT: Antibiotic interaction testing made easy.

Nikos Fatsis-Kavalopoulos et al.*PLoS biology*, 18(9), e3000856-e3000856 (2020-09-18)

Antibiotic combination therapies are important for the efficient treatment of many types of infections, including those caused by antibiotic-resistant pathogens. Combination treatment strategies are typically used under the assumption that synergies are conserved across species and strains, even though recent

Pathogenic E. coli Extracts Nutrients from Infected Host Cells Utilizing Injectisome Components.

Ritesh Ranjan Pal et al.*Cell*, 177(3), 683-696 (2019-04-02)

Microbiota and intestinal epithelium restrict pathogen growth by rapid nutrient consumption. We investigated how pathogens circumvent this obstacle to colonize the host. Utilizing enteropathogenic E. coli (EPEC), we show that host-attached bacteria obtain nutrients from infected host cell in a process we

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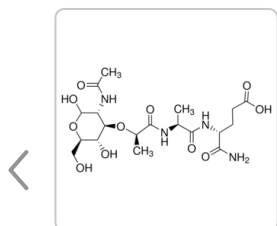
PROTOCOLS AND ARTICLES

Protocols

USP HPLC Analysis of Ampicillin Sodium on Ascentis® Express C18

USP HPLC Analysis of Ampicillin Sodium on Ascentis® Express C18

RECENTLY VIEWED PRODUCTS



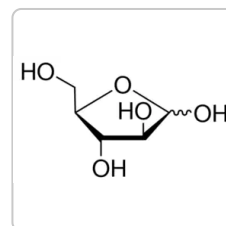
Sigma-Aldrich

A9519

N-Acetylmuramyl-L-alanyl-D-isoglutamine hydrate

≥98% (TLC)

[View Price and Availability](#)



Sigma-Aldrich

A9524

DL-Arabinose

≥98%

[View Price and Availability](#)

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1 RATINGS-ONLY REVIEW

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