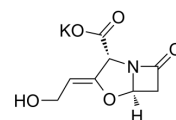
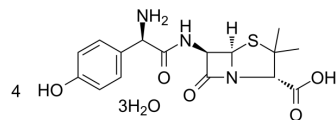


Amoxicillin trihydrate mixture with potassium clavulanate (4:1)

Cat. No.:	HY-131165
Molecular Formula:	C ₂₄ H ₃₃ KN ₄ O ₁₃ S
Molecular Weight:	656.7
Target:	Antibiotic; Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Amoxicillin (trihydrate) mixture with potassium clavulanate (4:1) an antibiotic with good oral absorption and broad spectrum antimicrobial activity. Amoxicillin (trihydrate) mixture with potassium clavulanate (4:1) inhibits the biosynthesis of polypeptides in the cell wall, thereby inhibiting cell growth ^{[1][2][3]} .
In Vitro	Amoxicillin (trihydrate) mixture with potassium clavulanate (4:1) (1-100 μM; 24 hours; <i>L. acidophilus</i>) decreases living cells and increases degree of cell wall rupture in a dose-dependent manner ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Amoxicillin (trihydrate) mixture with potassium clavulanate (4:1) (7 mg/kg; i.h.; female ICR/Swiss mice) inhibits strain numbers and improves the survival rate of rats in 1 mg/L or less ^[2] . Amoxicillin (trihydrate) mixture with potassium clavulanate (4:1) (1.6-9.5 mg/kg; p.o.; daily, for 7 or 14 days; swiss albino mice) has against infection with chlamydia trachomatis in mice ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Model:	Female ICR/Swiss mice ^[2]
Dosage:	7 mg/kg
Administration:	Subcutaneous injection; every 8 h, for 24 hours
Result:	Inhibited bacterial numbers in a dose-dependent manner.
Animal Model:	Female ICR/Swiss mice ^[2]
Dosage:	7 mg/kg
Administration:	Subcutaneous injection; every 8 h, for 4 days
Result:	Survived all animals that were infected with organisms for which MICs were 1 mg/L or less, and with the two strains for which MICs were 2 mg/L, 20 to 40% mortality.
Animal Model:	Swiss albino mice ^[3]

Dosage:	1.6 and 9.5 mg/kg
Administration:	Oral administration; daily, for 7 or 14 days
Result:	Improved the activity of Chlamydia trachomatis infection in mice.

CUSTOMER VALIDATION

- Nat Commun. 2022 Mar 2;13(1):1116.
- Chemosphere. 2019 Jun;225:378-387.
- Antimicrob Agents Chemother. 2021 Feb 17;65(3):e01921-20.
- Environ Sci Pollut Res Int. 2017 Feb;24(6):5918-5932.
- Biomed Res Int. 2018 Jul 2;2018:3579832.

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REFERENCES

- [1]. Guo Y, et, al. Metabolic response of Lactobacillus acidophilus exposed to amoxicillin. J Antibiot (Tokyo). 2022 May;75(5):268-281.
- [2]. Andes D, et, al. In vivo activities of amoxicillin and amoxicillin-clavulanate against Streptococcus pneumoniae: application to breakpoint determinations. Antimicrob Agents Chemother. 1998 Sep;42(9):2375-9.
- [3]. Kramer MJ, et, al. Activity of oral amoxicillin, ampicillin, and oxytetracycline against infection with chlamydia trachomatis in mice. J Infect Dis. 1979 Jun;139(6):717-9.
- [4]. Michael Spector, et al. Formulations of amoxicillin and clavulanate potassium and methods for using same. WO2013173803A2.

Caution: Product has not been fully validated for medical applications. For research use only.

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