

## Meropenem (Cas No 119478-56-7)



Meropenem

CAS number 119478-56-7

Systematic (IUPAC) name

3-[5-(dimethylcarbamoyl) pyrrolidin-2-yl] sulfanyl-6- (1-hydroxyethyl)-4-methyl-7-oxo- 1-azabicyclo[3.2.0] hept-2-ene-2-carboxylic acid

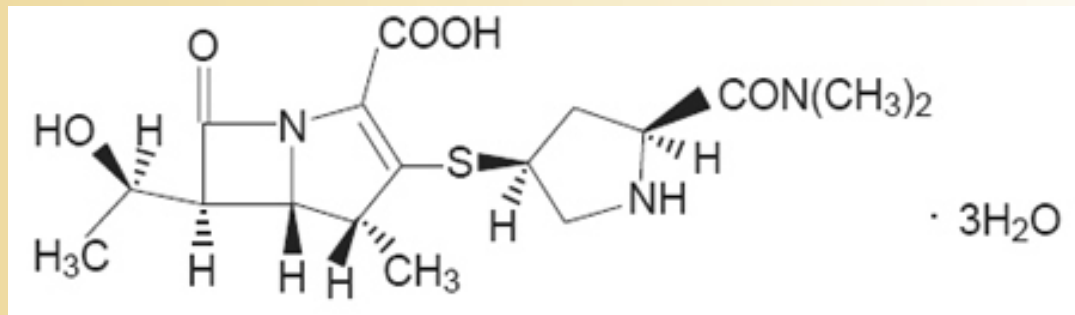
Identifiers

CAS number 119478-56-7

ATC code J01DH02

PubChem 64778

DrugBank APRD01097



Chemical data

Formula  $C_{17}H_{25}N_3O_5S$  Mol. mass 383.464 g/mol

Pharmacokinetic data

Bioavailability 100%

Protein binding Approximately 2%.

To reduce the development of drug-resistant bacteria and maintain the effectiveness of meropenem for injection and other antibacterial drugs, should be used only to treat or prevent infections that are proven or strongly suspected to be caused by bacteria.

Meropenem for injection is a sterile, pyrogen-free, synthetic, broad-spectrum, carbapenem antibiotic for intravenous administration. It is (4R,5S,6S)-3-[[[(3S,5S)-5-(Dimethylcarbamoyl)-3-pyrrolidinyl]thio]-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid trihydrate. Its empirical formula is  $C_{17}H_{25}N_3O_5S \cdot 3H_2O$  with a molecular weight of 437.52.

The solution varies from colorless to yellow depending on the concentration. The pH of freshly constituted solutions is between 7.3 and 8.3. Meropenem is soluble in 5% monobasic potassium phosphate solution, sparingly soluble in water, very slightly soluble in hydrated ethanol, and practically insoluble in acetone or ether.