M5600
Meropenem

Synonyms:	Mesalazine; Mesalamine
CAS:	96036-03-2
Formula:	$C_{17}H_{25}N_3O_5S$
Mol. Weight:	383.46

Properties

Form:	Powder
Appearance:	White to Light Yellow
Application:	Antibiotic
Solubility:	Water
Storage Temp:	2-6°C
Typical Working Concentration:	Varies by application. Concentration should be determined by end user.
Other Notes:	Plant Tissue Culture Tested

Application Notes

A broad spectrum antibiotic that has a high affinity for cell wall-synthesizing enzymes. Meropenem is very effective because it resists inactivation by the majority of microbial LACTB (β-lactamases). It is a beta-lactam and belongs to the subgroup of carbapenem. Meropenem is bactericidal except against Listeria monocytogenes where it is bacteriostatic. It inhibits bacterial wall synthesis like other beta-lactam antibiotics. In contrast to other beta-lactams, it is highly resistant to degradation by beta-lactamases or cephalosporinases.

The spectrum of action includes many gram-positive and gram-negative bacteria (including *Pseudomonas*) and anaerobic bacteria.

Konagaya *et al*. note the successful elimination of *Agrobacterium* from *Cryptomeria japonica* (Japanese cedar) cultures using a concentration of 10 mg/L of Meropenem without observing phytotoxic effects.

References

Kayser, F H., et al., (1989) Activity of meropenem, against gram-positive bacteria. The Journal of antimicrobial chemotherapy. 24: 101-12.

Konagaya, K. I., Kurita, M., & Taniguchi, T. (2013). High-efficiency Agrobacterium-mediated transformation of Cryptomeria japonica D. Don by co-cultivation on filter paper wicks followed by meropenem treatment to eliminate Agrobacterium. Plant Biotechnology, 30(5), 523-528.

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