ALPHA DIAGNOSTIC INTERNATIONAL

Product Data Sheet

LIFE TECH Life Technologies™ Your Molecular & Cell Technology Partner

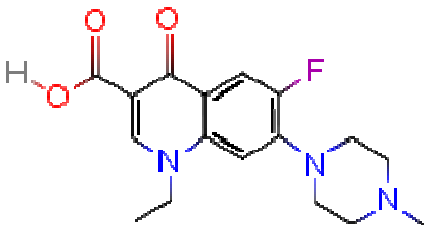
Cat # ABT-610-025	Pazufloxacin (Pharma Grade)	Size: 250 mg
Cat # ABT-610-005	Pazufloxacin (Pharma Grade)	Size: 50 g

General Information

Pefloxacin is a synthetic chemotherapeutic agent used to treat severe and life threatening bacterial infections. Pefloxacin is commonly referred to as a fluoroquinolone (or quinolone) drug and is a member of the fluoroquinolone class of antibacterials. It is an analog of norfloxacin. It is a synthetic fluoroquinolone, belonging to the 3rd generation of quinolones. Pefloxacin is extensively prescribed in France. Pefloxacin has not been approved for use in the United States.

Mechanism of action:

The bactericidal action of pefloxacin results from interference with the activity of the bacterial enzymes DNA gyrase and topoisomerase IV, which are needed for the transcription and replication of bacterial DNA. DNA gyrase appears to be the primary quinolone target for gram-negative bacteria. Topoisomerase IV appears to be the preferential target in gram-positive organisms. Interference with these two topoisomerases results in strand breakage of the bacterial chromosome, supercoiling, and resealing. As a result DNA replication and transcription is inhibited. The fluoroquinolones interfere with DNA replication by inhibiting an enzyme complex called DNA gyrase. This can also affect mammalian cell replication. In particular, some congeners of this drug family display high activity not only against bacterial topoisomerases, but also against eukaryotic topoisomerases and are toxic to cultured mammalian cells and in vivo tumor models. Although the quinolone is highly toxic to mammalian cells in culture, its mechanism of cytotoxic action is not known. Quinolone induced DNA damage was first reported in 1986. Recent studies have demonstrated a correlation between mammalian cell cytotoxicity of the quinolones and the induction of micronuclei. As such some fluoroquinolones may cause injury to the chromosome of eukaryotic cells. There continues to be considerable debate as to whether or not this DNA damage is to be considered one of the mechanisms of action concerning the severe and non abating adverse reactions experienced by some patients following fluoroquinolone therapy.



Molecular Formula:
$C_{17}H_{20}FN_3O_3$
Molecular Weight:
333.36 g/mol

ABT-610-005 **110523AO**

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com