

Pafuramidine

Catalog No: tcsc1470



Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg



Specifications

CAS No:

186953-56-0

Formula:

$C_{20}H_{20}N_4O_3$

Pathway:

Anti-infection

Target:

Parasite

Purity / Grade:

>98%

Solubility:

H₂O :

Alternative Names:

DB289

Observed Molecular Weight:

364.4

Product Description

Pafuramidine (DB289) is an orally bioavailable prodrug of furamidine, which has clinical activity against *Pneumocystis pneumonia*.

IC50 Value: 4.5 nM (In vitro inhibitory activity against *Trypanosoma brucei rhodesiense*) [4]

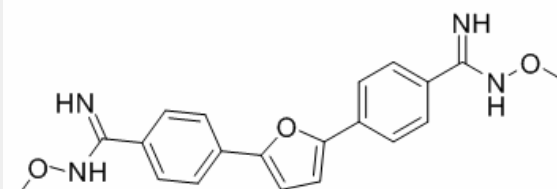
Target: Antiparasitic

DB289 (pafuramidine maleate; 2,5-bis[4-(N-methoxyamidino)phenyl]furan monomaleate) is a prodrug of DB75 (furamidine dihydrochloride; 2,5-bis(4-guanylphenyl)furan dihydrochloride), an aromatic dication related to pentamidine that has demonstrated good efficacy against African trypanosomiasis, *Pneumocystis carinii* pneumonia, and malaria, but lacks adequate oral availability.

in vitro: The results of this investigation suggest that DB75 inhibits mitochondrial function. Yeast cells relying upon mitochondrial metabolism for energy production are especially sensitive to DB75 [1].

in vivo: Clearance of DB289 approximated the liver plasma flow and its large volume of distribution was consistent with extensive tissue binding. Plasma protein binding of DB289 was 97 to 99% in four animal species and humans, but that of DB75 was noticeably less and more species- and concentration-dependent [2]. Despite excellent oral activity against early-stage sleeping sickness, oral administration of DB289 exhibited limited efficacy in mouse models of late-stage disease [3].

Clinical trial: DB289, a novel orally active prodrug of DB75, is undergoing phase IIb clinical trials for early-stage human African trypanosomiasis, *Pneumocystis jirovecii carinii* pneumonia, and malaria [1].



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!