Inhibitors, Agonists, Screening Libraries

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Data Sheet

Product Name: Efinaconazole
Cat. No.: HY-15660
CAS No.: 164650-44-6
Molecular Formula: C₁₈H₂₂F₂N₄O
Molecular Weight: 348.39
Target: Fungal
Pathway: Anti-infection
Solubility: 10 mM in DMSO

BIOLOGICAL ACTIVITY:
Efinaconazole (KP-103) is a novel triazole antifungal drug currently under development as a topical treatment for onychomycosis. IC₅₀ value: 0.0039 ug/ml (MIC for T. mentagrophytes SM-110) [1]

Target: antifungal agent

in vitro: Efinaconazole was 4-fold more active than itraconazole against T. mentagrophytes SM-110 (MICs of 0.0039 and 0.016 μg/ml, respectively). Similarly, efinaconazole was 8-fold more active than clotrimazole against C. albicans ATCC 10231 (MICs of 0.00098 and 0.0078 μg/ml, respectively) [1]. In a comprehensive survey of 1,493 isolates, efinaconazole MICs against T. rubrum and T. mentagrophytes ranged from ≤ 0.002 to 0.06 μg/ml, with 90% of isolates inhibited (MIC₉₀) at 0.008 and 0.015 μg/ml, respectively. Efinaconazole MICs against 105 C. albicans isolates ranged from ≤ 0.0005 to >0.25 μg/ml, with 50% of isolates inhibited (MIC₅₀) by 0.001 and 0.004 μg/ml at 24 and 48 h, respectively [2].

in vivo: The therapeutic efficacy of KP-103, a triazole derivative, for 10 guinea pigs with interdigital tinea pedis or tinea corporis was investigated. Topical KP-103 solution (0.25 to 1%) was dose-dependently effective in treating both dermatophytopses. A 1% KP-103-treatment rendered all infected skins culture-negative on day-2 posttreatment [3].

References:

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