Web: www.taiclone.com
Tel: +886-2-2735-9682
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Pirfenidone

Catalog No: tcsc2905

Available Sizes

Size: 100mg

Size: 500mg

Size: 1g

Size: 5g

Specifications

CAS No:
53179-13-8

Formula:
$C_{12}H_{11}NO$

Pathway:
Stem Cell/Wnt;TGF-beta/Smad

Target:
TGF-beta/Smad;TGF-beta/Smad

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 100 mg/mL (539.90 mM)

Alternative Names:
AMR69

Observed Molecular Weight:
185.22

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Product Description

Pirfenidone leads to a reduction of **TGF-β_2** mRNA levels and of the mature **TGF-β_2** protein due to decreased expression and direct inhibition of the **TGF-β** pro-protein convertase furin.

IC50 & Target: TGF-β_2[1]

In Vitro: Pirfenidone (PFD) reduces the protein levels of the matrix metalloproteinase (MMP)-11, a TGF-β target gene and furin substrate involved in carcinogenesis. These data define PFD or PFD-related agents as promising agents for human cancers associated with enhanced TGF-β activity[1]. In RAW264.7 cells, a murine macrophage-like cell line, Pirfenidone suppresses the proinflammatory cytokine TNF-α by a translational mechanism, which is independent of activation of the MAPK2, p38 MAPK, and JNK. In the murine endotoxin shock model, Pirfenidone potently inhibits the production of the proinflammatory cytokines, TNF-α, interferon-γ, and interleukin-6, but enhances the production of the anti-inflammatory cytokine, interleukin-10[2]. Pirfenidone (PFD) shows its inhibitory effects on the proliferation of HLECs. Cell proliferation is attenuated in the 0.3 mg/mL group after 24 hours compare with the control group (P=0.044). The effect is more apparent in the 0.5 mg/mL group at 24, 48, and 72 hours (P[3].

In Vivo: Administration of Pirfenidone (300 mg/kg/day) for 4 wk. Pirfenidone significantly attenuates the score when administered in Bleomycin (BLM)-treated mice (P[4].