

## Pirfenidone

货号: P3806

储存条件: 粉末-20°C 可保存 3 年; 液体-80°C 可保存 12 月。

### 产品描述

Pirfenidone is mainly used in treatment for idiopathic pulmonary fibrosis based on its inhibition on production of growth factors, such as TGF $\beta$ . Over-expression of TGF- $\beta$  in chronic inflammation, remodeling, fibrotic process and susceptibility to viral infection is established in the most prevalent chronic respiratory diseases including idiopathic pulmonary fibrosis, lung cancer, chronic obstructive pulmonary disease and asthma. Pirfenidone can inhibit TGF $\beta$  expression or TGF $\beta$ -induced fibrogenesis by blocking nuclear translocation of Smads. Treatment of pirfenidone at concentration of 0.3 mg/ml can decrease the expression level of TGF- $\beta$  1, 2, 3 in HTF cells. Pretreatment with pirfenidone at concentration 0.5 mg/ml for 1h can inhibit TGF  $\beta$ -induced nuclear localization of the Smads in ARPE-19 cells, but has little effect on p-smad2/3. In the presence of pirfenidone at concentration 0.5 mg/ml for 1h with TGF $\beta$  (10 ng/ml) for an additional 48 h, cell migration and expression of extracellular matrix induced by TGF $\beta$ , including collagen type I and fibronectin, can be inhibited in ARPE-19 cells. Oral administration of pirfenidone, 300 mg/kg, daily for 4 weeks, can attenuates bleomycin-induced pulmonary fibrosis in mice. Increased expression levels of TGF- $\beta$  1, TNF- $\alpha$  and PDGF of idiopathic pulmonary fibrosis rat models can be converted to almost normal when the rats treated with 100 mg/kg pirfenidone once daily on day 15, 30 and 45. Pirfenidone can attenuate the EMT process induced not only by exogenous TGF- $\beta$  1 but also by paracrine TGF- $\beta$  produced from NSCLC cells. Up to now, pirfenidone treatment of idiopathic pulmonary fibrosis is approved by FDA (see <https://www.fda.gov/>).

### 作用机制

Pirfenidone can inhibit TGF $\beta$  expression or TGF $\beta$ -induced fibrogenesis by blocking nuclear translocation of Smads. But the mechanism for the process is unknown.

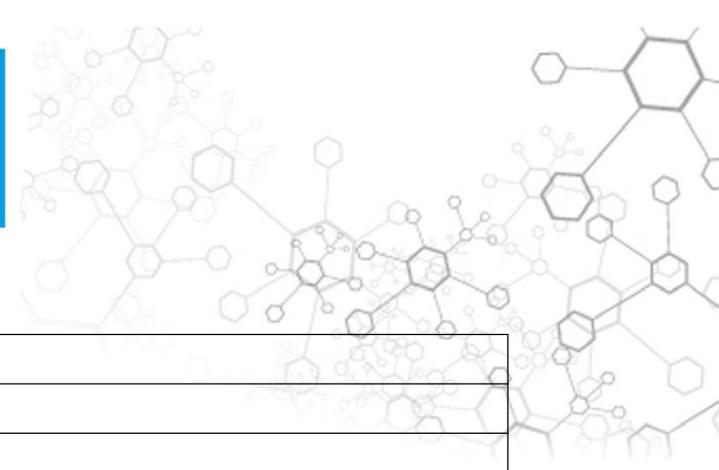
储存液制备	质量	1 mg	5 mg	10 mg
	1 mM	5.3989 mL	26.9947 mL	53.9893 mL
	5 mM	1.0798 mL	5.3989 mL	10.7979 mL
	10 mM	0.5399 mL	2.6995 mL	5.3989 mL





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产品信息

CAS 号	53179-13-8	
分子式	C <sub>12</sub> H <sub>11</sub> NO	
分子量	185.22	
溶解度	DMSO	440.0 mg/mL (2375.5 mM) warming
	Water	4.0 mg/mL (21.6 mM) warming

