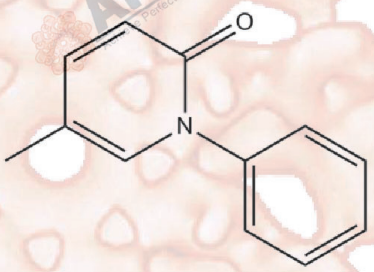
Product Data Sheet

# Pirfenidone




**Cat. No.:** B2288
**CAS No.:** 53179-13-8
**Formula:** C12H11NO
**M.Wt:** 185.22
**Synonyms:**
**Target:** TGF-β / Smad Signaling
**Pathway:** SMAD
**Storage:** Store at -20°C

## Solvent & Solubility

In Vitro

⩾36 mg/mL in EtOH; ⩾38.4 mg/mL in DMSO; ⩾7.68 mg/mL in H2O with gentle warming

Preparing Stock Solutions

| Concentration \ Mass / Solvent | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 5.3990 mL | 26.9949 mL | 53.9898 mL |
| 5 mM | 1.0798 mL | 5.3990 mL | 10.7980 mL |
| 10 mM | 0.5399 mL | 2.6995 mL | 5.3990 mL |

Please refer to the solubility information to select the appropriate solvent.

## Biological Activity

| | |
|---|---|
| Shortsummary | TGF-β production inhibitor |
| $IC_{50}$ & Target | |

In Vitro

**Cell Viability Assay**

| | |
|---|---|
| Cell Line: | LN-308 and CCL-64 cells |
| Preparation method: | The solubility of this compound in DMSO is > 9.3 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below - 20 °C for several months. |
| Reacting conditions: | 1 ~ 10 mM |

| | | |
|---|---|---|
| | Applications: | In LN-308 cells, Pirfenidone (< 10 mM) dose-dependently reduced glioma cell. Pirfenidone (< 8.3 mM) also inhibited the activity of recombinant furin and down-regulated the expression of MMP-11 in a dose-dependent manner. In CCL-64 cells, Pirfenidone (< 5 mM) inhibited TGF-β bioactivity by down-regulating TGF-β2 mRNA expression and affecting pro-TGF-β processing. |
| In Vivo | **Animal experiment** | |
| | Animal models: | SD rats |
| | Dosage form: | 250 mg/kg/day; p.o. |
| | Applications: | In SD rats receiving a low-salt diet, Pirfenidone at the dose of 250 mg/kg/day alleviated cyclosporine-induced fibrosis by approximately 50% and down-regulated TGF-β1 protein expression by 80%. These results indicated that Pirfenidone could attenuate renal fibrosis as well as decreased matrix deposition. |
| | Other notes: | Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal. |

## Product Citations

**See more customer validations on www.apexbt.com.**

## References

[1]. Burghardt I, Tritschler F, Opitz C A, et al. Pirfenidone inhibits TGF-β expression in malignant glioma cells[J]. Biochemical and biophysical research communications, 2007, 354(2): 542-547.

[2]. Shihab F S, Bennett W M, Yi H, et al. Pirfenidone Treatment Decreases Transforming Growth Factor - β1 and Matrix Proteins and Ameliorates Fibrosis in Chronic Cyclosporine Nephrotoxicity[J]. American Journal of Transplantation, 2002, 2(2): 111-119.

## Caution

**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

*Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.*

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