## **Product** Data Sheet

# Proadifen hydrochloride

Cat. No.: HY-B1311

CAS No.: 62-68-0

Molecular Formula:  $C_{23}H_{32}CINO_{2}$ 

Molecular Weight: 389.96

Target: Cytochrome P450

**Pathway:** Metabolic Enzyme/Protease

**Storage:** 4°C, sealed storage, away from moisture

\* In solvent: -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

### **SOLVENT & SOLUBILITY**

In Vitro

DMSO: 50 mg/mL (128.22 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg
	1 mM	2.5644 mL	12.8218 mL	25.6437 mL
	5 mM	0.5129 mL	2.5644 mL	5.1287 mL
	10 mM	0.2564 mL	1.2822 mL	2.5644 mL

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

In Vivo

- 1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (5.33 mM); Clear solution
- 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (5.33 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (5.33 mM); Clear solution

#### **BIOLOGICAL ACTIVITY**

Description

Proadifen hydrochloride is a Cytochrome P450 inhibitor (IC50 =  $19\mu$ M). IC50 value:  $19\mu$ MTarget: P450Proadifen HCl has many biochemical functions, some of which include: inhibitory effects on NOS1 (neuronal nitric oxide synthase; IC50 = 90 mM), adult mouse skeletal muscle AChR (acetyl choline receptor), hepatic drug metabolism via the CYP (cytochrome P450) system, CYP-dependent (cytochrome P450-dependent) arachidonate metabolism (90% at  $50~\mu$ M), transmembrane calcium influx, and platelet thromboxane synthesis. This compound has also been shown to block KIR6.1 (ATP-sensitive inward rectifier potassium channel 8; IC50 = 4.4 mM) and stimulate endothelial cell prostacyclin production.

## **CUSTOMER VALIDATION**

• Signal Transduct Target Ther. 2022 Jun 24;7(1):190.

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

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