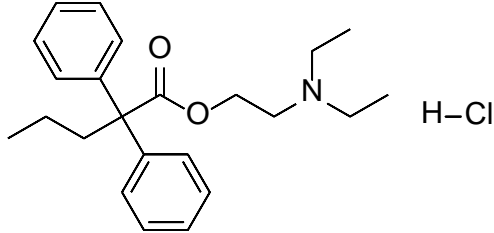


Product data sheet



MedKoo Cat#: 592140 Name: Proadifen hydrochloride CAS: 62-68-0 Chemical Formula: C ₂₃ H ₃₂ ClNO ₂ Exact Mass: 389.2122 Molecular Weight: 389.964	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

Proadifen hydrochloride is an inhibitor of drug metabolism and CYTOCHROME P-450 ENZYME SYSTEM activity.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	25.0	64.11
DMSO	35.0	89.75
Ethanol	20.0	51.29
PBS (pH 7.2)	0.14	0.36

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.56 mL	12.82 mL	25.64 mL
5 mM	0.51 mL	2.56 mL	5.13 mL
10 mM	0.26 mL	1.28 mL	2.56 mL
50 mM	0.05 mL	0.26 mL	0.51 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Jendželovský R, Koval J, Mikeš J, Papčová Z, Plšíková J, Fedoročko P. Inhibition of GSK-3 β reverses the pro-apoptotic effect of proadifen (SKF-525A) in HT-29 colon adenocarcinoma cells. *Toxicol In Vitro*. 2012 Sep;26(6):775-82. doi: 10.1016/j.tiv.2012.05.014. Epub 2012 Jun 7. PMID: 22683934.

2. Morris DD, Moore JN, Wiltshire N, Fischer K. Proadifen-induced production of prostacyclin by equine peritoneal macrophages. *Am J Vet Res*. 1989 May;50(5):747-50. PMID: 2499232.

In vivo study

1. Paliokha R, Grinchii D, Khoury T, Nejati Bervanlou R, Dremencov E. Inhibition of cytochrome P450 with proadifen alters the excitability of brain catecholamine-secreting neurons. *Gen Physiol Biophys*. 2022 May;41(3):255-262. doi: 10.4149/gpb_2022017. PMID: 35616005.

2. Ohhira S, Matsui H, Watanabe K. Effects of pretreatment with SKF-525A on triphenyltin metabolism and toxicity in mice. *Toxicol Lett*. 2000 Nov 20;117(3):145-50. doi: 10.1016/s0378-4274(00)00255-1. PMID: 11087980.

Product data sheet



7. Bioactivity

Biological target:

Proadifen hydrochloride is a Cytochrome P450 inhibitor (IC₅₀ = 19μM).

In vitro activity

The aim of this study therefore was to evaluate the potential anti-proliferative effect of proadifen on HT-29 colon cancer cells. The results show that proadifen inhibited the growth of HT-29 cells by the accumulation of cells in the G1 phase of the cell cycle, reduction of metabolic activity and colony formation and by the induction of apoptosis. Analyses of Western blots and flow cytometry revealed time- and dose-dependent phosphatidylserine externalization, caspase-3 activation and PARP cleavage.

Reference: Toxicol In Vitro. 2012 Sep;26(6):775-82. <https://pubmed.ncbi.nlm.nih.gov/22683934/>

In vivo activity

The aim of this study was to investigate the effect of SKF525 on the excitability of central catecholamine neurons. Adult male Wistar rats were administered SKF525 forty-eight, twenty-four, and one hour before electrophysiological assessments. It was found that the SKF525 enhanced the excitability of noradrenaline and reduced the excitability of dopamine neurons. This study suggests that corticosterone-induced inhibition of 5-HT neurons underlines, at least in part, the ability of SKF525 to stimulate noradrenaline neurons. The inhibitory effect of SKF525 on dopamine neurons might be in turn secondary to the stimulatory effect of this compound on noradrenaline neurons.

Reference: Gen Physiol Biophys. 2022 May;41(3):255-262. <https://pubmed.ncbi.nlm.nih.gov/35616005/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.