

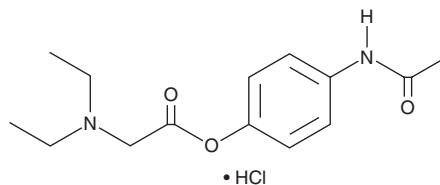
PRODUCT INFORMATION



Propacetamol (hydrochloride)

Item No. 36134

CAS Registry No.: 66532-86-3
Formal Name: N,N-diethyl-glycine, 4-(acetilamino) phenyl ester, monohydrochloride
MF: $C_{14}H_{20}N_2O_3 \cdot HCl$
FW: 300.8
Purity: $\geq 90\%$
UV/Vis.: λ_{max} : 248 nm
Supplied as: A solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Propacetamol (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the propacetamol (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Propacetamol (hydrochloride) is soluble in the organic solvent DMSO at a concentration of approximately 1 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of propacetamol (hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of propacetamol (hydrochloride) in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Propacetamol is a prodrug form of the analgesic and antipyretic agent acetaminophen (Item No. 10024).¹ It is converted to acetaminophen by rat liver microsomes. Propacetamol reduces acetic acid-induced writhing in mice and LPS-induced pyresis in rats when administered at doses of 200 and 600 mg/kg, respectively.^{1,2} Propacetamol (1,200 mg/kg) induces hepatotoxicity, decreases hepatic glutathione (GSH), superoxide dismutase (SOD), and glutathione peroxidase (GPX) levels, increases hepatic malondialdehyde (MDA) and nitrotyrosine levels, and increases mortality in mice.³

References

1. Murie, V.E., Marques, L.M.M., Souza, G.E.P., *et al.* Acetaminophen prodrug: Microwave-assisted synthesis and *in vitro* metabolism evaluation by mass spectrometry. *J. Braz. Chem. Soc.* **27**(6), 1121-1128 (2016).
2. Zhang, Y., Du, L., Pan, H., *et al.* Enhanced analgesic effects of propacetamol and tramadol combination in rats and mice. *Biol. Pharm. Bull.* **34**(3), 349-353 (2011).
3. Liou, G.-G., Hsieh, C.-C., Lee, Y.-J., *et al.* N-Acetyl cysteine overdose inducing hepatic steatosis and systemic inflammation in both propacetamol-induced hepatotoxic and normal mice. *Antioxidants (Basel)* **10**(3), 442 (2021).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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