



# LKT Laboratories, Inc.

## Loperamide Hydrochloride

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### Product Information

**Product ID** L5660

**CAS No.** 34552-83-5

**Chemical Name** 4-(4-Chlorophenyl)-4-hydroxy-N,N-dimethyl- $\alpha,\alpha$ -diphenyl-1-piperidinbutanamide hydrochloride

**Synonym** Imodium, Tebloc, Dissenten, Lopemin

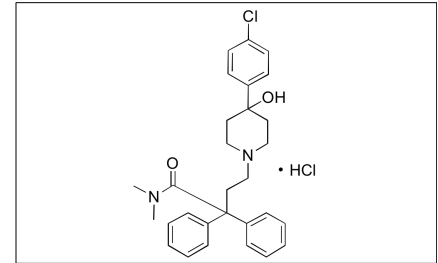
**Formula**  $C_{29}H_{33}ClN_2O_2 \cdot HCl$

**Formula Wt.** 513.51

**Melting Point** 222-223 °C

**Purity**  $\geq 98\%$

**Solubility** Soluble in methanol or chloroform.



**Bulk quantities available upon request**

Product ID	Size
L5660	5 g
L5660	25 g

**Store Temp** Ambient

**Ship Temp** Ambient

**Description** Loperamide is a  $\mu$ -opioid receptor ( $\mu$ OR) agonist that exhibits gastrointestinal motility modulating, anorexigenic, analgesic, and antinociceptive activities; it also potentially inhibits HCN channels. Loperamide is clinically used as an anti-diarrheal drug as it increases gastric emptying and decreases bowel water content. Loperamide also alters pain thresholds in animal models as measured by the Hargreaves paw withdrawal apparatus. Additionally, loperamide decreases foraging behavior and body weight in vivo. Loperamide also acts as a functional inhibitor of acid sphingomyelinase (FIASMA).

**References** Kumar R. Loperamide: from antidiarrheal to analgesic. J Opioid Manag. 2013 Jul-Aug;9(4):301-2. PMID: 24353024.

Kumar R, Reeta KH, Ray SB. Antinociceptive effect of intrathecal loperamide: role of mu-opioid receptor and calcium channels. Eur J Pharmacol. 2012 Dec 5;696(1-3):77-82. PMID: 23022331.

Placidi E, Marciani L, Hoad CL, et al. The effects of loperamide, or loperamide plus simethicone, on the distribution of gut water as assessed by MRI in a mannitol model of secretory diarrhoea. Aliment Pharmacol Ther. 2012 Jul;36(1):64-73. PMID: 22582872.

Chumakova YA, Bashkatova VG, Sudakov SK. Changes in feeding behavior after peripheral loperamide administration in rats. Bull Exp Biol Med. 2011 Feb;150(4):398-400. PMID: 22268026.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.