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DATASHEET

Loperamide hydrochloride

Product overview

Name	Loperamide hydrochloride
Cat No	HB0385
Biological action	Agonist
Purity	>99%
Description	Potent, selective μ -opioid receptor agonist

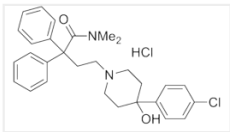
Biological Data

Biological description	Potent and selective μ -opioid receptor agonist (K_i values are 3, 48 and 1156 nM for μ , δ and κ). Blocks voltage-activated calcium channels and also NMDA receptor Ca^{2+} influx at higher concentrations. Shows antidiarrheal and antihyperalgesic actions.
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Solubility & Handling

Storage instructions	Room temperature
Solubility overview	Soluble in ethanol (50mM) or DMSO (50mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	4-(4-Chlorophenyl)-4-hydroxy- <i>N,N</i> -dimethyl- α,α -diphenyl-1-piperidinebutanamidehydrochloride
Molecular Weight	513.51
Chemical structure	
Molecular Formula	$\text{C}_{29}\text{H}_{33}\text{ClN}_2\text{O}_2 \cdot \text{HCl}$
CAS Number	34552-83-5
PubChem identifier	71420
SMILES	<chem>Cl.CN(C)C(=O)C(CCN1CCC(O)(CC1)C1=CC=C(Cl)C=C1)(C1=CC=CC=C1)C1=CC=CC=C1</chem>
InChiKey	PGYPOBZJRVSMDS-UHFFFAOYSA-N

References

Loperamide (ADL 2-1294), an opioid antihyperalgesic agent with peripheral selectivity.

DeHaven-Hudkins DL *et al* (1999) J Pharmacol Exp Ther 289(1)

PubMedID [10087042](#)

Loperamide blocks high-voltage-activated calcium channels and N-methyl-D-aspartate-evoked responses in rat and mouse cultured hippocampal pyramidal neurons.

Church J *et al* (1994) Mol Pharmacol 45(4)

PubMedID 8183255

Maitotoxin-elicited calcium influx in cultured cells. Effect of calcium-channel blockers.

Daly JW *et al* (1995) Biochem Pharmacol 50(8)

PubMedID 7488233
