PRODUCT INFORMATION

Loperamide (hydrochloride)
Item No. 14875

CAS Registry No.: 34552-83-5
Formal Name: 4-(4-chlorophenyl)-4-hydroxy-N,N-dimethyl-a,a-diphenyl-1-piperidinebutanamide, monohydrochloride
Synonyms: NSC 696356, PJ 185, R 18553
MF: C_{29}H_{33}ClN_{2}O_{2} • HCl
FW: 513.5
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years

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

Description

Loperamide is an opiate which potently and selectively activates μ opioid receptors (K_i = 0.16 nM) exclusively in the periphery.\textsuperscript{1,2} It is a much weaker agonist of the δ opioid receptor (K_i = 50 nM).\textsuperscript{1} Through its actions in the gut wall, loperamide has antidiarrheal action by increasing transit time and by altering intestinal transport of water and electrolytes.\textsuperscript{2,3} It also blocks voltage-sensitive sodium channels (IC_{50} = 270 nM) and high voltage-activated calcium channels (IC_{50} = 900 nM), presumably through an inhibitory effect on calmodulin.\textsuperscript{2,4,5} Loperamide is comparable to morphine in blocking peripheral pain in rats.\textsuperscript{6}

References