TOCRIS
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Print Date: Jan 15th 2016

Certificate of Analysis

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Product Name: **Lansoprazole** **Catalog No.: 2582** **Batch No.: 1**

CAS Number: 103577-45-3

IUPAC Name: 2-[[[3-Methyl-4-(2,2,2-trifluoroethoxy)-2-pyridinyl]methyl]sulfinyl]-1*H*-benzimidazole

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{16}H_{14}F_3N_3O_2S$

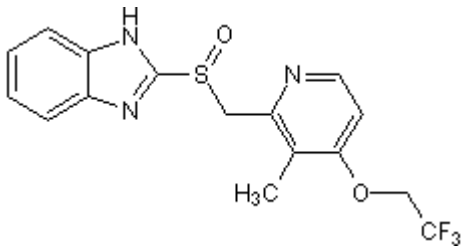
Batch Molecular Weight: 369.36

Physical Appearance: White solid

Solubility: 1eq. HCl to 50 mM
DMSO to 100 mM
ethanol to 50 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows >99.5% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	52.03	3.82	11.38
Found	52.03	3.7	11.31

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Description:

H^+,K^+-ATPase inhibitor (IC_{50} = 6.3 µM) that displays antisecretory and antiulcer activity. Inhibits gastric acid secretion (IC_{50} = 0.09 µM for histamine-induced acid formation) and reduces gastric lesion formation induced by a variety of ulcerative stimuli. Antibacterial against Helicobacter pylori in vitro. Also blocks swelling-dependent chloride channel (ICIswell) in NIH3T3 fibroblasts. More potent than omeprazole (Cat. No. 2583).

Physical and Chemical Properties:

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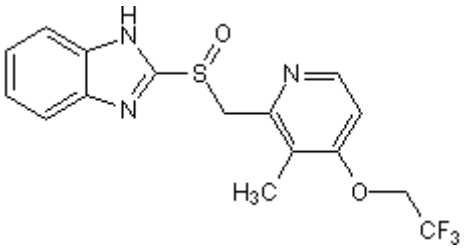
Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

1eq. HCl to 50 mM
DMSO to 100 mM
ethanol to 50 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Satoh *et al* (1989) Antisecretory and antiulcer activities of a novel proton pump inhibitor AG-1749 in dogs and rats. J.Pharmacol.Exp.Ther. ***248*** 806. PMID: 2537418.

Schmarda *et al* (2000) The gastric H,K-ATPase blocker lansoprazole is an inhibitor of chloride channels. Br.J.Pharmacol. ***129*** 598. PMID: 10711360.

Matheson and Jarvis (2001) Lansoprazole. Drugs ***61*** 1801. PMID: 11693467.

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