
Product Data Sheet

Product Name: Lansoprazole sodium

Cat. No.: GC12112

Chemical Properties

Cas. No. 226904-00-3

Chemical Name sodium;2-[[3-methyl-4-(2,2,2-trifluoroethoxy)pyridin-2-yl]methylsulfinyl]benzimidazol-1-ide

SMILES CC1=C(C=CN=C1CS(=O)C2=NC3=CC=CC=C3[N-]2)OCC(F)(F)F.[Na+]

Formula $C_{16}H_{13}F_3N_3NaO_2S$ M.Wt 391.34

Solubility $\geq 15.05\text{mg/mL}$ in Ethanol Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

Background

Lansoprazole sodium is a proton-pump inhibitor (PPI) and also can inhibit cytochrome P450 [1].

Lansoprazole sodium is a substituted benzimidazole and has been widely used as acid inhibitory agent for treatment of disorders related to gastric acid secretion. Lansoprazole sodium has been exhibited to inhibit stomach acid by blocking the H^+/K^+ ATPase system at the secretory surface of gastric parietal cells. As the human P450 enzymes including CYP2C9, 2C19, 2D6 and 3A4, in addition, Lansoprazole sodium has been reported to have the competitively inhibitory effect on the activity of CYP2C9 in HLM with a K_i value of $21\mu\text{M}$. Lansoprazole sodium has been found to be potent CYP2C19 inhibitor with a K_i value of about $1\mu\text{M}$ in both HLM and rCYP2C19 tests. Besides, Lansoprazole sodium has been revealed to inhibit the activities of CYP2D6 and CYP3A4 with IC_{50} values of both $>200\mu\text{M}$ [1].

References:

Caution: Product has not been fully validated for medical applications. For research use only.

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[1] Li XQ1, Andersson TB, Ahlström M, Weidolf L. Comparison of inhibitory effects of the proton pump-inhibiting drugs omeprazole, esomeprazole, lansoprazole, pantoprazole, and rabeprazole on human cytochrome P450 activities. Drug Metab Dispos. 2004 Aug;32(8):821-7.

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