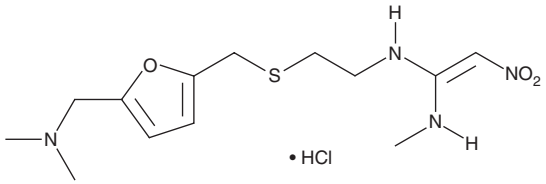
PRODUCT INFORMATION

Ranitidine (hydrochloride)

Item No. 16939

CAS Registry No.: 66357-59-3
Formal Name: N'-[2-[[[5-[(dimethylamino)methyl]-2-furanyl]methyl]thio]ethyl]-N-methyl-2-nitro-1,1-ethenediamine, monohydrochloride
MF: $C_{13}H_{22}N_4O_3S \bullet HCl$
FW: 350.9
Purity: ≥98%
UV/Vis.: λ_{max}: 230, 325 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Ranitidine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the ranitidine (hydrochloride) in the solvent of choice. Ranitidine (hydrochloride) is soluble in organic solvents such as DMSO, which should be purged with an inert gas. The solubility of ranitidine (hydrochloride) in DMSO is approximately 1 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ranitidine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ranitidine (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ranitidine is a histamine H_2 receptor antagonist.[1] It reverses histamine-induced relaxation of isolated rat uterine horn (pA_2 = 6.9) as well as histamine-induced increases in contraction frequency in isolated guinea pig right atrium (pA_2 = 7.2). Ranitidine (0.03-3 mg/kg, i.v.) inhibits histamine-and pentagastrin-induced gastric acid secretion in a dose-dependent manner in anesthetized rats. Formulations containing ranitidine have been used in the treatment and preventrion of heartburn and gastroesophageal reflux disease (GERD).

Reference

1. Daly, M.J., Humphray, J.M., and Stables, R. Some *in vitro* and *in vivo* actions of the new histamine H_2-receptor antagonist, ranitidine. Br. J. Pharmacol. 72(1), 49-54 (1981).

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