

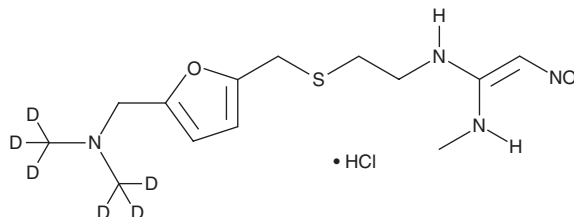
# PRODUCT INFORMATION



## Ranitidine-d<sub>6</sub> (hydrochloride)

Item No. 22583

**CAS Registry No.:** 1185238-09-8  
**Formal Name:** (E)-N-(2-(((5-((bis(methyl-d<sub>3</sub>)amino)methyl) furan-2-yl)methyl)thio)ethyl)-N'-methyl-2-nitroethene-1,1-diamine, monohydrochloride  
**MF:** C<sub>13</sub>H<sub>16</sub>D<sub>6</sub>N<sub>4</sub>O<sub>3</sub>S • HCl  
**FW:** 356.9  
**Chemical Purity:** ≥95% (Ranitidine)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>6</sub>); ≤1% d<sub>0</sub>  
**UV/Vis.:** λ<sub>max</sub>: 231, 326 nm  
**Supplied as:** A 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-d<sub>6</sub> is intended for use as an internal standard for the quantification of ranitidine (Item No. 16939) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Ranitidine-d<sub>6</sub> (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the ranitidine-d<sub>6</sub> (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Ranitidine-d<sub>6</sub> (hydrochloride) is soluble in the organic solvent DMSO at a concentration of approximately 1 mg/ml.

### Description

Ranitidine is a histamine H<sub>2</sub> receptor antagonist.<sup>1</sup> It reverses histamine-induced relaxation of isolated rat uterine horn (pA<sub>2</sub> = 6.9) as well as histamine-induced increases in contraction frequency in isolated guinea pig right atrium (pA<sub>2</sub> = 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 prevention 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<sub>2</sub>-receptor antagonist, ranitidine. *Br. J. Pharmacol.* **72**(1), 49-54 (1981).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/21/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM