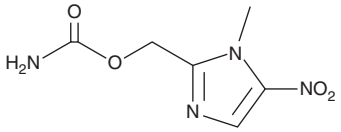
PRODUCT INFORMATION

Ronidazole

Item No. 33071

CAS Registry No.: 7681-76-7
Formal Name: 1-methyl-5-nitro-1H-imidazole-2-methanol, 2-carbamate
Synonym: Ridzol
MF: $C_6H_8N_4O_4$
FW: 200.2
Purity: ≥98%
UV/Vis.: λ_{max}: 301 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

Ronidazole is supplied as a solid. A stock solution may be made by dissolving the ronidazole in the solvent of choice, which should be purged with an inert gas. Ronidazole is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of ronidazole in these solvents is approximately 30 mg/ml.

Ronidazole is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ronidazole should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Ronidazole has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Ronidazole is a carbamate ester with antiprotozoal and antibiotic activities.[1] It is active against a panel of *T. foetus* isolates with minimum lethal concentrations (MLCs) ranging from 0.625 to 1.25 µg/ml. It is also active against *C. difficile* bacteria (MIC_{90} = 0.125 µg/ml).[2] Ronidazole (50 mg/kg) inhibits infection relapse in a cat model of experimental *T. foetus* infection.[3] It also inhibits *T. muris* infection in mice when administered at a concentration of 400 mg/L in drinking water.[4] Ronidazole (10 mg/kg) increases survival in a mouse model of *C. difficile* infection.[2] Formulations containing ronidazole have been used in the treatment of *T. foetus* infection in cats.

References

1. Kather, E.J., Marks, S.L., and Kass, P.H. Determination of the in vitro susceptibility of feline *Tritrichomonas foetus* to 5 antimicrobial agents. *J. Vet. Intern. Med.* **21(5)**, 966-970 (2007).
2. AbdelKhalek, A. and Seleem, M.N. Repurposing the veterinary antiprotozoal drug ronidazole for the treatment of *Clostridioides difficile* infection. *Int. J. Antimicrob. Agents* **56(6)**, 106188 (2020).
3. Gookin, J.L., Copple, C.N., Papich, M.G., *et al.* Efficacy of ronidazole for treatment of feline *Tritrichomonas foetus* infection. *J. Vet. Intern. Med.* **20(3)**, 536-543 (2006).
4. Steiner, J.M., Schwamberger, S., Pantchev, N., *et al.* Use of ronidazole and limited culling to eliminate *Tritrichomonas muris* from laboratory mice. *J. Am. Assoc. Lab. Anim. Sci.* **55(4)**, 480-483 (2016).

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