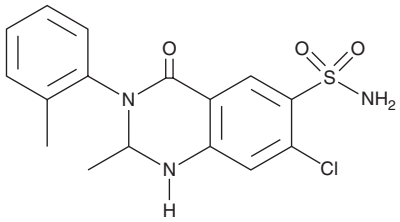
PRODUCT INFORMATION

Metolazone

Item No. 15987

CAS Registry No.: 17560-51-9
Formal Name: 7-chloro-1,2,3,4-tetrahydro-2-methyl-3-(2-methylphenyl)-4-oxo-6-quinazolinesulfonamide
Synonym: SR 720-22
MF: $C_{16}H_{16}ClN_3O_3S$
FW: 365.8
Purity: ≥98%
UV/Vis.: λ_{max}: 236, 343 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

Metolazone is supplied as a crystalline solid. A stock solution may be made by dissolving the metolazone in the solvent of choice. Metolazone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of metolazone in ethanol is approximately 0.3 mg/ml and approximately 25 mg/ml in DMSO and DMF.

Metolazone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, metolazone should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Metolazone has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Metolazone is a thiazide-like diuretic.[1,2] It inhibits the Na^+/Cl^- cotransporter (IC_{50} = 0.3 µM for the rat transporter) and human carbonic anhydrase VII (CAVII), CAXII, and CAXIII (K_is = 2.1, 5.4, and 15 nM, respectively). Metolazone (0.3 and 1 mg/kg) induces fluid loss and enhances captopril-induced decreases in blood pressure in spontaneously hypertensive rats.[3] Formulations containing metolazone have been used in the treatment of high blood pressure.

References

1. Moreno, E., Cristóbal, P.S., Rivera, M., *et al.* Affinity-defining domains in the Na-Cl cotransporter: A different location for Cl- and thiazide binding. *J. Biol. Chem.* **281(25)**, 17266-17275 (2006).
2. Temperini, C., Cecchi, A., Scozzafava, A., *et al.* Carbonic anhydrase inhibitors. Interaction of indapamide and related diuretics with 12 mammalian isozymes and X-ray crystallographic studies for the indapamide-isozyme II adduct. *Bioorg. Med. Chem. Lett.* **18(8)**, 2567-2573 (2008).
3. Chiu, P.J.S., Vemulapalli, S., and Barnett, A. Acute blood pressure and urinary responses to single dose combinations of captopril and diuretics in conscious spontaneously hypertensive rats. *J. Pharm. Pharmacol.* **37(2)**, 105-109 (1985).

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, 12/08/2022

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