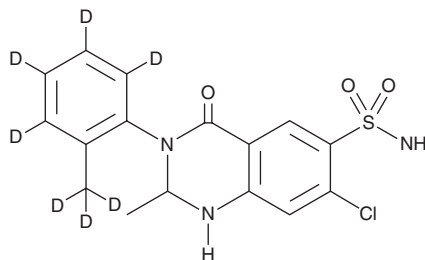


PRODUCT INFORMATION



Metolazone-d₇ Item No. 34243

CAS Registry No.: 2714484-71-4
Formal Name: 7-chloro-1,2,3,4-tetrahydro-2-methyl-3-[2-(methyl-d₃)phenyl-3,4,5,6-d₄]-4-oxo-6-quinazolinesulfonamide
Synonym: SR 720-22-d₇
MF: C₁₆H₉D₇ClN₃O₃S
FW: 372.9
Chemical Purity: ≥90% (Metolazone)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₇); ≤1% d₀
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

Metolazone-d₇ is intended for use as an internal standard for the quantification of metolazone (Item No. 15987) 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).

Metolazone-d₇ is supplied as a solid. A stock solution may be made by dissolving the metolazone-d₇ in the solvent of choice, which should be purged with an inert gas. Metolazone-d₇ is soluble in methanol and DMSO.

Description

Metolazone is a thiazide-like diuretic.^{1,2} It inhibits the Na⁺/Cl⁻ cotransporter (IC₅₀ = 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.

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