Misonidazole
Item No. 15606

CAS Registry No.: 13551-87-6
Formal Name: α-(methoxymethyl)-2-nitro-1H-imidazole-1-ethanol
Synonyms: NSC 261037, Ro 7-0582, SR 1354
MF: C₂₇H₁₁N₅O₄
FW: 421.3
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis: λ_max: 222, 317 nm

Laboratory Procedures

For long term storage, we suggest that misonidazole be stored as supplied at -20°C. It should be stable for at least two years.

Misonidazole is supplied as a crystalline solid. A stock solution may be made by dissolving the misonidazole in the solvent of choice. Misonidazole is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of misonidazole in ethanol is approximately 5 mg/ml and approximately 15 mg/ml in DMSO and DMF.

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 misonidazole can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of misonidazole in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Misonidazole is a nitroimidazole with radiosensitizing and antineoplastic properties. Nitroimidazoles, including misonidazole, specifically accumulate as nitro anion radicals and their metabolites in hypoxic cells. The metabolites of misonidazole can themselves be cytotoxic or they can increase the chemosensitivity and radiosensitivity of the target cells. Misonidazole and derivatives, including fluoromisonidazole, are used in the imaging of hypoxic regions in tumors and in the cardiovascular system.

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/15606

WARNING: This product is for laboratory research only; not for administration to humans. Not for human or veterinary diagnostic or therapeutic use.

SAFETY DATA
This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. 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
Cayman Chemical Company makes no warranty or guarantee of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals herein. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

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