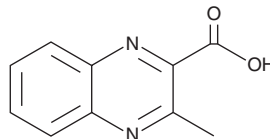


PRODUCT INFORMATION

3-Methylquinoxaline-2-carboxylic Acid

Item No. 25664

CAS Registry No.: 74003-63-7
Formal Name: 3-methyl-2-quinoxalinecarboxylic acid
Synonym: MQCA
MF: C₁₀H₈N₂O₂
FW: 188.2
Purity: ≥98%
UV/Vis.: λ_{max}: 236, 317, 477 nm
Supplied as: A neat oil
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

3-Methylquinoxaline-2-carboxylic acid (MQCA) is supplied as a neat oil. A stock solution may be made by dissolving the MQCA in the solvent of choice, which should be purged with an inert gas. MQCA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MQCA in ethanol and DMF is approximately 25 mg/ml and approximately 30 mg/ml in DMSO.

MQCA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MQCA should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. MQCA has a solubility of approximately 0.1 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

MQCA is a major metabolite of olaquinox, an antibiotic and swine growth regulator.^{1,2} It induces cell cycle arrest at the S phase and is toxic to Chang liver cells in a concentration- and time-dependent manner.² MQCA has been used as a marker of olaquinox use in livestock applications.¹

References

1. Le, T., Zhu, L., and Yu, H. Dual-label quantum dot-based immunoassay for simultaneous determination of Carbadox and Olaquinox metabolites in animal tissues. *Food Chem.* **199**, 70-74 (2016).
2. Zhang, K., Ban, M., Zhao, Z., et al. Cytotoxicity and genotoxicity of 1,4-bisdesoxyquinocetone, 3-methylquinoxaline-2-carboxylic acid (MQCA) in human hepatocytes. *Res. Vet. Sci.* **93(3)**, 1393-1401 (2012).

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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