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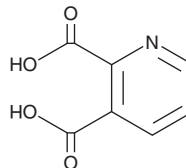


PRODUCT INFORMATION

Quinolinic Acid

Item No. 14941

CAS Registry No.: 89-00-9
Formal Name: 2,3-pyridinedicarboxylic acid
Synonyms: NSC 13127, NSC 18836, NSC 403247
MF: C₇H₅NO₄
FW: 167.1
Purity: ≥98%
UV/Vis.: λ_{max}: 216, 264 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

Quinolinic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the quinolinic acid in the solvent of choice, which should be purged with an inert gas. Quinolinic acid is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of quinolinic acid in these solvents is approximately 16 mg/ml.

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 quinolinic acid can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of quinolinic acid in PBS (pH 7.2) is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Quinolinic acid is an active metabolite of tryptophan (Item Nos. 29600 | 31210) and an NMDA receptor agonist.^{1,2} It is formed from tryptophan via the kynurenine pathway.³ Quinolinic acid (100 μM) induces lipid peroxidation in rat brain synaptosomes, an effect that can be reversed by the NMDA receptor antagonist 2-amino-5-phosphonovaleric acid.⁴ It decreases the viability of primary rat neurons when used at a concentration of 25 μM.⁵ Intracerebroventricular administration of quinolinic acid (1 μg/animal) induces convulsions in mice.⁶ Increased plasma levels of quinolinic acid negatively correlate with Brief Neurocognitive Assessment (BNA) scores in patients with schizophrenia.⁷

References

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- Lapin, I.P. *J. Neural. Transm.* **42**(1), 37-43 (1978).
- Cathomas, F., Guetter, K., Seifritz, E., et al. *Sci. Rep.* **11**(1), 9992 (2021).

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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