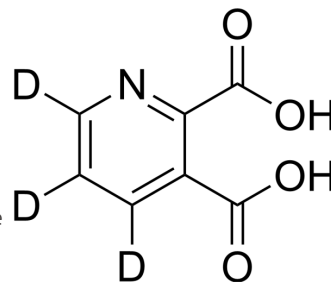


Quinolinic acid-d₃

| | | | |
|---------------------------|---|-------|----------|
| Cat. No.: | HY-100807S | | |
| CAS No.: | 138946-42-6 | | |
| Molecular Formula: | C ₇ H ₂ D ₃ NO ₄ | | |
| Molecular Weight: | 170.14 | | |
| Target: | iGluR; Endogenous Metabolite | | |
| Pathway: | Membrane Transporter/Ion Channel; Neuronal Signaling; Metabolic Enzyme/Protease | | |
| Storage: | Powder | -20°C | 3 years |
| | | 4°C | 2 years |
| | In solvent | -80°C | 6 months |
| | | -20°C | 1 month |



BIOLOGICAL ACTIVITY

| | |
|-------------------------------------|--|
| Description | Quinolinic acid-d ₃ is the deuterium labeled Quinolinic acid. Quinolinic acid is an endogenous N-methyl-D-aspartate (NMDA) receptor agonist synthesized from L-tryptophan via the kynurenine pathway and thereby has the potential of mediating N-methyl-D-aspartate neuronal damage and dysfunction[1][2]. |
| IC₅₀ & Target | NMDA Receptor |
| In Vitro | Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Jang S, et al. Neuroprotective effects of (-)-epigallocatechin-3-gallate against quinolinic acid-induced excitotoxicity via PI3K pathway and NO inhibition. *Brain Res.* 2010 Feb 8;1313:25-33.
- [3]. Heyes MP, et al. Quinolinic acid and kynurenine pathway metabolism in inflammatory and non-inflammatory neurological disease. *Brain.* 1992 Oct;115 (Pt 5):1249-73.

Caution: Product has not been fully validated for medical applications. For research use only.

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