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ProductInformation

Kynurenic acid

Product Number **K 3375**
Store at Room Temperature

Product Description

Molecular Formula: $C_{10}H_7NO_3$
Molecular Weight: 189.2
Melting point: 282-283 °C[1] (with decomposition)[2]
Extinction coefficient: E^{mM} = 9.8 (332 nm, pH 7), 7.92 (344 nm, pH 7)[3]
Synonym: 4-Hydroxy-2-quinolinecarboxylic acid

Kynurenic acid is an NMDA excitatory amino acid receptor antagonist.[4] It blocks kainic acid-induced neurotoxicity. It is found in the urine of some animals as a metabolite of tryptophan. The excretion is increased in avitaminoses B_1, B_2, and B_6.[1] In a study of rat brain tissue, concentrations of kynurenic acid in rat brain tissue were significantly lower at birth as compared to those found prenatally; then kynurenic acid decreased in the first postnatal week and increased thereafter.[5] In a study on the effect of L-kynurenine, kynurenic acid, and quinolinic acid on rat heart mitochondrial function, only kynurenic acid affected dose-dependently the respiratory parameters of heart mitochondria.[6] Kynurenic acid failed to affect nicotine-induced convulsions in mice which may indicate that γ;7 nicotinic receptor-mediated events play no role in seizure activity produced by nicotine.[7]

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

Kynurenic acid is soluble in water (approximately 0.9% at 100 ºC) and in hot alcohol.[1] It is also soluble in 0.1 N NaOH (4 mg/ml) and DMSO (5 mg/ml), but is insoluble in ether.

Storage/Stability

Solutions may be stored for several days at 4 °C.

References

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