bio-techne
TOCRIS

Print Date: Jun 18th 2024

Certificate of Analysis

www.tocris.com

Product Name: **Ketamine hydrochloride** **Catalog No.: 3131** **Batch No.: 1**

CAS Number: 1867-66-9 EC Number: 217-484-6

IUPAC Name: 2-(2-Chlorophenyl)-2-(methylamino)cyclohexanone hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{13}H_{16}ClNO.HCl$

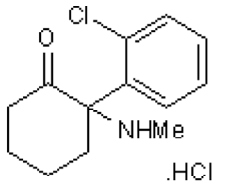
Batch Molecular Weight: 274.19

Physical Appearance: White crystalline solid

Solubility: water to 100 mM

Storage: Store at RT

Batch Molecular Structure:



$C_{13}H_{17}Cl_2NO$
Mol. Wt.: 274.19

2. ANALYTICAL DATA

HPLC: Shows 100% purity

Mass Spectrum: Consistent with structure

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CAS Number: 1867-66-9 EC Number: 217-484-6

IUPAC Name: 2-(2-Chlorophenyl)-2-(methylamino)cyclohexanone hydrochloride

Description:

Ketamine hydrochloride is a non-competitive NMDA receptor antagonist (EC_{50} values are 13.6 and 17.6 µM for GluN1/GluN2A (formally NR1 and NR2A, respectively) and GluN1/GluN2B (formally NR1 and NR2B, respectively) subunit combinations respectively). Dissociative anesthetic. S-enantiomer and Active metabolite also available. Please refer to IUPHAR Guide to Pharmacology for the most recent naming conventions. . Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

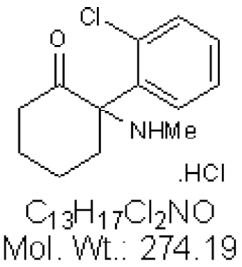
Batch Molecular Formula: $C_{13}H_{16}ClNO.HCl$

Batch Molecular Weight: 274.19

Physical Appearance: White crystalline solid

Minimum Purity: ≥99%

Batch Molecular Structure:



$C_{13}H_{17}Cl_2NO$
Mol. Wt.: 274.19

Storage: Store at RT

Solubility & Usage Info:

water to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

Other Information:

INFORMATION FOR CUSTOMERS IN THE UK ONLY

This product is a Schedule 2 Home Office controlled substance and customers in the UK are required to hold the relevant licence or be exempt from restrictions in order to purchase and possess this material.

References:

Liu *et al* (2001) Modulation of NMDA receptor function by KA and magnesium: part I. Anesth.Pharmacol. ***92*** 1173.

Pallares *et al* (1995) Effects of KA, a noncompetitive NMDA antagonist, on the acquisition of the lever-press response in rats. Physiol.Behav. ***57*** 389. PMID: 7716221.

Anis *et al* (1983) The dissociative anaesthetics, KA and phencyclidine, selectively reduce excitation of central mammalian neurones by N-methyl-aspartate. Br.J.Pharmacol. ***79*** 565. PMID: 6317114.

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