

Product Name: (R)-Norketamine hydrochloride

Catalog No.: 5996

Batch No.: 2

CAS Number: 83777-68-8

IUPAC Name: (R)-2-Amino-2-(2-chlorophenyl)cyclohexan-1-one hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₂H₁₄ClNO.HCl.H₂O

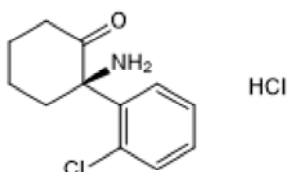
Batch Molecular Weight: 278.18

Physical Appearance: Off-white solid

Solubility: water to 20 mM
DMSO to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100% purity

Chiral HPLC: Shows 100% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: [α]_D = -109.8 (Concentration = 1, Solvent = Water)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	51.81	6.16	5.04
Found	51.41	6.11	4.88

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

NMDA receptor modulator. Metabolite of Ketamine hydrochloride. Decreases intracellular D-serine concentration (IC₅₀ = 91 nM) and alters serine racemase expression in PC-12 cells. Exhibits analgesic effects in rat pain models. S-enantiomer and racemate also available.

Physical and Chemical Properties:

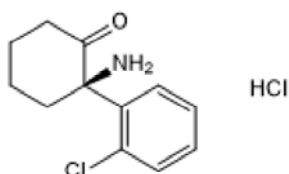
Batch Molecular Formula: C₁₂H₁₄ClNO.HCl.H₂O

Batch Molecular Weight: 278.18

Physical Appearance: Off-white solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 20 mM

DMSO to 100 mM

CAUTION - This product is hygroscopic and we recommend that it is desiccated upon arrival. Solutions should be made up as soon as the vial is opened.

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. Our standard recommendations are:

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:

Singh *et al* (2016) KA metabolites enantioselectively decrease intracellular D-serine concentrations in PC-12 cells. PLoS One **11** e0149499. PMID: 27096720.

Holtman *et al* (2008) Effects of norKA enantiomers in rodent models of persistent pain. Pharmacol.Biochem.Behav. **909** 676. PMID: 18586315.

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