

Product Name: (S)-Norketamine hydrochloride

Catalog No.: 6112

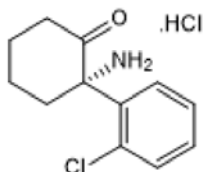
Batch No.: 1

CAS Number: 83777-70-2

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₂H₁₄ClNO.HCl
Batch Molecular Weight: 260.16
Physical Appearance: White solid
Solubility: water to 100 mM
DMSO to 100 mM
Storage: Desiccate at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.3 (Dichloromethane:Methanol:Ammonia soln. [19:0.9:0.1])
HPLC: Shows >99.9% purity
Chiral HPLC: Shows >99.8% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Optical Rotation: [α]_D = +101.9 (Concentration = 1, Solvent = Water)
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	55.4	5.81	5.38
Found	55.48	5.84	5.39

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 = 62.4 nM) and alters serine racemase expression in PC-12 cells. Exhibits analgesic effects in rat pain models. R-enantiomer and racemate also available.

Physical and Chemical Properties:

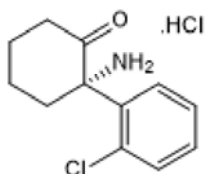
Batch Molecular Formula: C₁₂H₁₄ClNO.HCl

Batch Molecular Weight: 260.16

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 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.

INFORMATION FOR CUSTOMERS IN CANADA ONLY

This product is a Schedule I CDSA controlled substance and customers in Canada require an import permit to purchase this material.

References:

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

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

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