

**Product Name:** (S)-Norketamine hydrochloride

**Catalog No.:** 6112

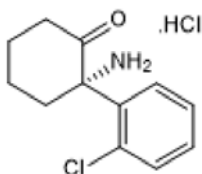
**Batch No.:** 1

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:** C<sub>12</sub>H<sub>14</sub>ClNO.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<sub>f</sub> = 0.3 (Dichloromethane:Methanol:Ammonia soln. [19:0.9:0.1])  
**HPLC:** Shows >99.9% purity  
**Chiral HPLC:** Shows >99.8% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Optical Rotation:** [α]<sub>D</sub> = +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 (IC<sub>50</sub> = 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:**

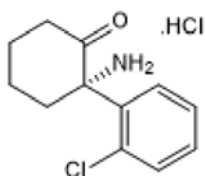
Batch Molecular Formula: C<sub>12</sub>H<sub>14</sub>ClNO.HCl

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.

**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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**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

www.tocris.com/distributors

Tel:+1 612 379 2956