bio-techne
TOCRIS

Print Date: Jun 21st 2023

Certificate of Analysis

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Product Name: **2*S*,6*S*-Hydroxynorketamine hydrochloride** **Catalog No.: 6095** **Batch No.: 1**

CAS Number: 1430202-70-2

IUPAC Name: (2*S*,6*S*)-2-Amino-2-(2-chlorophenyl)-6-hydroxycyclohexanone hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{12}H_{14}ClNO_2.HCl.½H_2O$

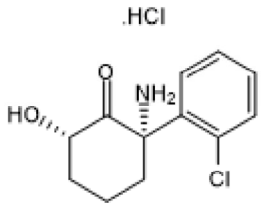
Batch Molecular Weight: 285.17

Physical Appearance: White solid

Solubility: water to 50 mM
DMSO to 100 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

Chiral HPLC: Shows 100% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: $[\alpha]_D$ = +111.2 (Concentration = 1, Solvent = Water)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	50.54	5.66	4.91
Found	50.64	5.41	4.87

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IUPAC Name: (2*S*,6*S*)-2-Amino-2-(2-chlorophenyl)-6-hydroxycyclohexanone hydrochloride

Description:

2S,6S-Hydroxynorketamine hydrochloride is a ketamine metabolite. Decreases intracellular D-serine (a NMDA co-agonist) concentrations in PC-12 cells (IC_{50} = 0.18 nM). Exerts antidepressant effects in mice. 2R,6R-Enantiomer and Racemate also available.

Physical and Chemical Properties:

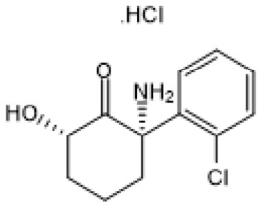
Batch Molecular Formula: $C_{12}H_{14}ClNO_2.HCl.½H_2O$

Batch Molecular Weight: 285.17

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

water to 50 mM
DMSO 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.

Licensing Information:

Sold under license from the NIH, US patent 62/313,309

References:

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

Zanos *et al* (2016) NMDAR inhibition-independent antidepressant actions of KA metabolites. Nature ***533*** 481. PMID: 27144355.