

Certificate of Analysis

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Product Name: 2*R*,6*R*-Hydroxynorketamine hydrochloride

Catalog No.: 6094

Batch No.: 2

CAS Number: 1430202-69-9

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₂H₁₄ClNO₂.HCl

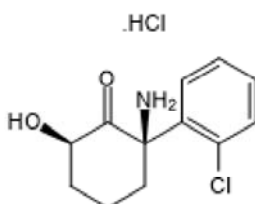
Batch Molecular Weight: 276.16

Physical Appearance: White solid

Solubility: water to 50 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

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	52.19	5.47	5.07
Found	52.13	5.45	4.92

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

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

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Description:

Ketamine metabolite. Enhances AMPA receptor-mediated excitatory post-synaptic potentials in the CA1 region of hippocampal slices. Decreases intracellular D-serine (a NMDA co-agonist) concentrations in PC-12 cells (IC₅₀ = 0.68 nM). Exerts antidepressant effects in mice. Lacks ketamine-related side effects. 2S,6S-Enantiomer and Racemate also available.

Physical and Chemical Properties:

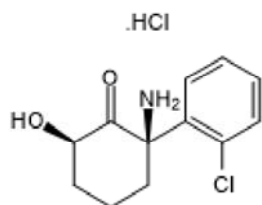
Batch Molecular Formula: C₁₂H₁₄ClNO₂.HCl

Batch Molecular Weight: 276.16

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Desiccate 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. 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 CANADA ONLY

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

Licensing Information:

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

References:

Singh et al (2016) Ketamine 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 ketamine metabolites. *Nature* **533** 481. PMID: 27144355.

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