

# Certificate of Analysis

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**Product Name:** RO-275

**Catalog No.:** 8977

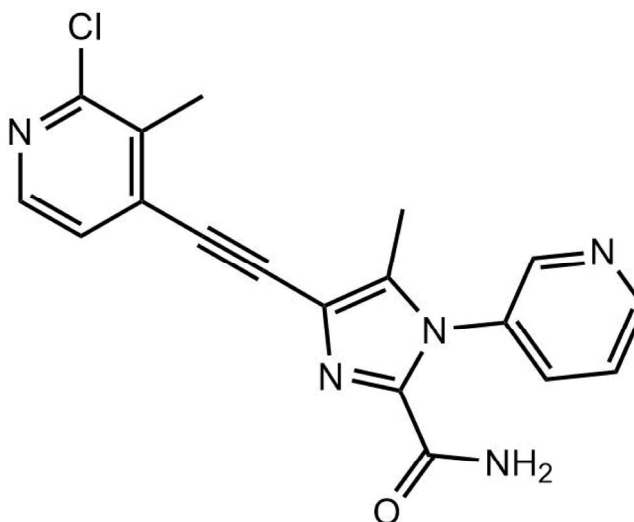
**Batch No.:** 1

CAS Number: 2648837-04-9

IUPAC Name: 4-((2-Chloro-3-methylpyridin-4-yl)ethynyl)-5-methyl-1-(pyridin-3-yl)-1*H*-imidazole-2-carboxamide

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>18</sub>H<sub>14</sub>ClN<sub>5</sub>O  
**Batch Molecular Weight:** 351.79  
**Physical Appearance:** Beige solid  
**Solubility:** DMSO to 50 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 98.0% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	61.46	4.01	19.91
Found	61.1	4.05	19.77

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

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**Description:**

RO-275 is a potent and selective HCN1 (hyperpolarization-activated cyclic-nucleotide-gated channel 1) inhibitor ( $IC_{50}$  = 46 nM). It shows <100-fold selectivity over HCN2, HCN3 and HCN4. In vivo, RO-275 improves performance in a translationally relevant touchscreen task of working memory (TUNL) in rats. RO-275 is orally bioavailable and brain-penetrant.

**Physical and Chemical Properties:**

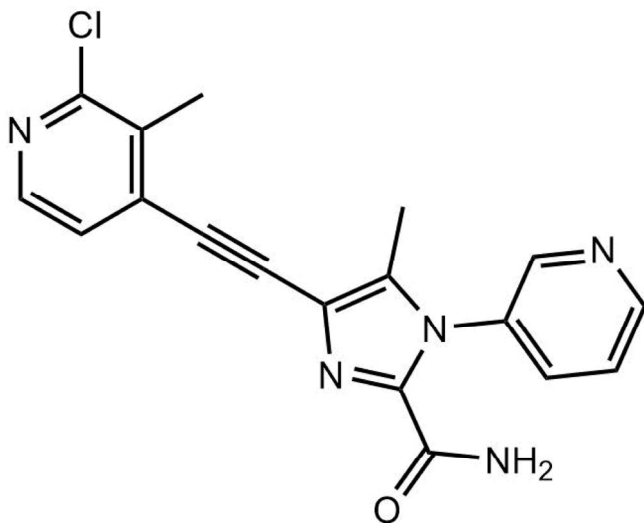
Batch Molecular Formula:  $C_{18}H_{14}ClN_5O$

Batch Molecular Weight: 351.79

Physical Appearance: Beige solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**CAUTION** - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

**Solubility & Usage Info:**

DMSO to 50 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:**

This compound is supplied in conjunction with the Structural Genomics Consortium. For further characterization details, please visit the RO-275 probe summary on the SGC website.

**References:**

**Harde et al** (2024) Selective and brain-penetrant HCN1 inhibitors reveal links between synaptic integration, cortical function, and working memory. *Cell.Chem.Biol.* **31** 577. PMID: 38042151.

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