

## Certificate of Analysis

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**Product Name:** Lonidamine

CAS Number: 50264-69-2

IUPAC Name: 1-[(2,4-Dichlorophenyl)methyl]-1*H*-indazole-3-carboxylic acid

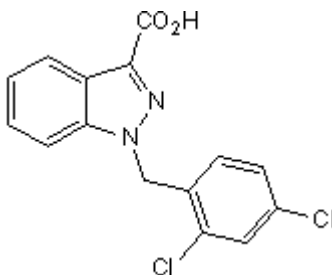
**Catalog No.:** 1646

**Batch No.:** 3

EC Number: 256-510-0

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>15</sub>H<sub>10</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>2</sub>  
**Batch Molecular Weight:** 321.16  
**Physical Appearance:** White solid  
**Solubility:** ethanol to 5 mM  
DMSO to 100 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.7 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])  
**HPLC:** Shows 98.1% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	56.1	3.14	8.72
Found	55.95	3.26	8.68

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IUPAC Name: 1-[(2,4-Dichlorophenyl)methyl]-1H-indazole-3-carboxylic acid

**Description:**

Anticancer and antispermatogenic agent in vitro and in vivo. Inhibits cellular energy metabolism in some cells via inhibition of mitochondrial hexokinase. Also blocks CFTR Cl<sup>-</sup> channels in vitro.

**Physical and Chemical Properties:**

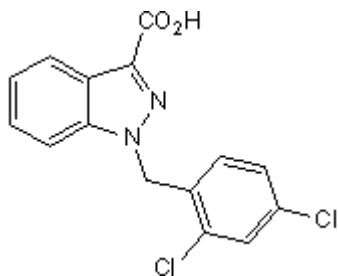
Batch Molecular Formula: C<sub>15</sub>H<sub>10</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>2</sub>

Batch Molecular Weight: 321.16

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**References:**

**Lobl et al** (1981) Effects of lonidamine (AF 1890) and its analogues on follicle-stimulating hormone, luteinizing hormone, testosterone and rat androgen binding protein concentrations in the rat and rhesus monkey. *Chemotherapy* **27** 61. PMID: 6793318.

**De Martino et al** (1984) Effects of lonidamine on murine and human tumor cells in vitro. A morphological and biochemical study. *Oncology* **41** 15. PMID: 6717891.

**Teiche** (1994) Lonidamine: *in vitro/in vivo* correlations. *Eur.J.Cancer* **30A** 1411. PMID: 7833093.

**Gong et al** (2002) Mechanism of lonidamine inhibition of the CFTR chloride channel. *Br.J.Pharmacol.* **137** 928. PMID: 12411425.

**Storage:** Store at RT

**Solubility & Usage Info:**

ethanol to 5 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.

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