



# **Certificate of Analysis**

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Product Name: Liarozole hydrochloride Catalog No.: 2705 Batch No.: 2

CAS Number: 145858-50-0

IUPAC Name: 5-[(3-Chlorophenyl)-1*H*-imidazol-1-ylmethyl]-1*H*-benzimidazole hydrochloride

## 1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C<sub>17</sub>H<sub>13</sub>ClN<sub>4</sub>.HCl.½H<sub>2</sub>O

Batch Molecular Weight: 354.24

Physical Appearance: Beige solid

**Solubility:** DMSO to 50 mM

ethanol to 100 mM

Storage: Desiccate at RT

**Batch Molecular Structure:** 

### 2. ANALYTICAL DATA

**TLC:**  $R_f = 0.15$  (Chloroform:Methanol [10:1])

HPLC: Shows >99.6% purity

<sup>1</sup>H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis: Carbon Hydrogen Nitrogen

Theoretical 57.64 4.27 15.82 Found 57.96 4.15 15.68



# **Product Information**

Print Date: Dec 6th 2013

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#### **Description:**

Cytochrome P450 inhibitor. Inhibits several cytochrome P450 enzymes including aromatase (CYP19) and retinoic acid 4-hydroxylase (CYP26). Blocks retinoic acid metabolism (retinoic acid metabolism blocking agent, RAMBA). Displays antitumor activity against androgen-dependent and independent rat prostate carcinomas.

#### **Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>17</sub>H<sub>13</sub>CIN<sub>4</sub>.HCl.½H<sub>2</sub>O

Batch Molecular Weight: 354.24 Physical Appearance: Beige solid

Minimum Purity: >99%

#### **Batch Molecular Structure:**

Storage: Desiccate at RT

#### Solubility & Usage Info:

DMSO to 50 mM ethanol 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:

sdasd

### References:

Van Wauwe et al (1992) Liarozole, an inhibitor of retinoic acid metabolism, exerts retinoid-mimetic effects in vivo. J.Pharmacol.Exp.Ther. **261** 773. PMID: 1374473.

**Njar** *et al* (2006) Retinoic acid metabolism blocking agents (RAMBAs) for treatment of cancer and dermatological diseases. Bioorg.Med.Chem. *14* 4323. PMID: 16530416.

Goss et al (2007) Effects of liarozole fumarate (R85246) in combination with tamoxifen on N-methyl-N-nitrosourea (MNU)-induced mammary carcinoma and uterus in the rat model. BMC Cancer 726. PMID: 17266767.

