

## Certificate of Analysis

**Product Name:** Etomidate

**Catalog No.:** 1471

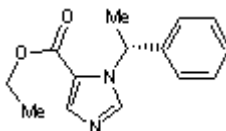
**Batch No.:** 1

CAS Number: 33125-97-2

IUPAC Name: (R)-1-(1-Phenylethyl)-1H-imidazole-5-carboxylic acid ethyl ester

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>14</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub>  
**Batch Molecular Weight:** 244.29  
**Physical Appearance:** White solid  
**Solubility:** ethanol to 100 mM  
 1eq. HCl to 50 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.41 (Dichloromethane:Methanol:Ammonia soln. [10:1:0.1])  
**Melting Point:** At 72°C  
**HPLC:** Shows 100% purity  
<sup>1</sup>H NMR: Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	68.83	6.6	11.47
Found	68.75	6.59	11.42

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

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**Description:**

General anesthetic with GABA modulatory and GABA-mimetic actions; selectively interacts with  $\beta$ 2- and  $\beta$ 3-subunit containing GABA<sub>A</sub> receptors. Short acting and potent hypnotic, with low toxicity.

**Physical and Chemical Properties:**

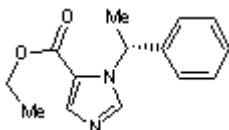
Batch Molecular Formula: C<sub>14</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub>

Batch Molecular Weight: 244.29

Physical Appearance: White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Store at RT

**Solubility & Usage Info:**

ethanol to 100 mM  
1eq. HCl 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. 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.

**References:**

**Giese et al** (1983) Etomidate: a new intravenous anesthetic induction agent. *Pharmacother.* **3** 251. PMID: 6359080.

**Belelli et al** (1997) The interaction of the general anesthetic etomidate with the  $\gamma$ -aminobutyric acid type A receptor is influenced by a single amino acid. *Proc.Natl.Acad.Sci.U.S.A.* **94** 11031. PMID: 9380754.

**Moody et al** (1998) Distinct structural requirements for the direct and indirect actions of the anaesthetic etomidate at GABA<sub>A</sub> receptors. *Toxicol.Lett.* **100-101** 209. PMID: 10049144.

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