

# Certificate of Analysis

**Product Name:** UK 78282 hydrochloride

**Catalog No.:** 3829

**Batch No.:** 1

CAS Number: 136647-02-4

IUPAC Name: 4-[(Diphenylmethoxy)methyl]-1-[3-(4-methoxyphenyl)propyl]-piperidine hydrochloride

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:**  $C_{29}H_{35}NO_2 \cdot HCl \cdot \frac{1}{2}H_2O$

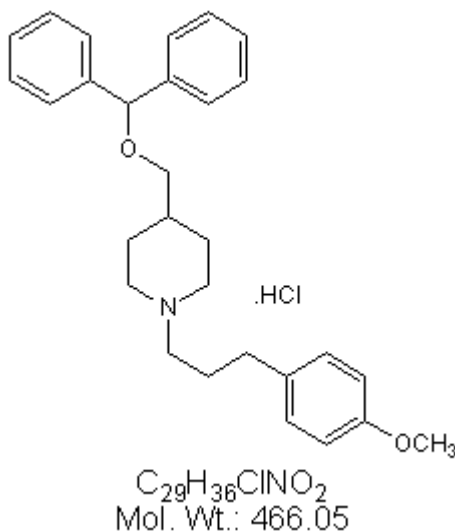
**Batch Molecular Weight:** 475.06

**Physical Appearance:** Off-white solid

**Solubility:** DMSO to 50 mM  
ethanol to 30 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**TLC:**  $R_f = 0.24$  (Chloroform:Methanol [25:1])

**HPLC:** Shows 99.9% purity

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

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	73.32	7.85	2.95
Found	73.35	7.59	2.97

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**Description:**

Blocker of the K<sub>v</sub>1.3 and K<sub>v</sub>1.4 voltage-gated potassium channels in T lymphocytes (IC<sub>50</sub> values are 0.28 and 0.17 μM respectively). Suppresses T lymphocyte mitogenesis; leads to membrane depolarization. Also blocks K<sub>v</sub>1.4 expressed in heart and brain.

**Physical and Chemical Properties:**

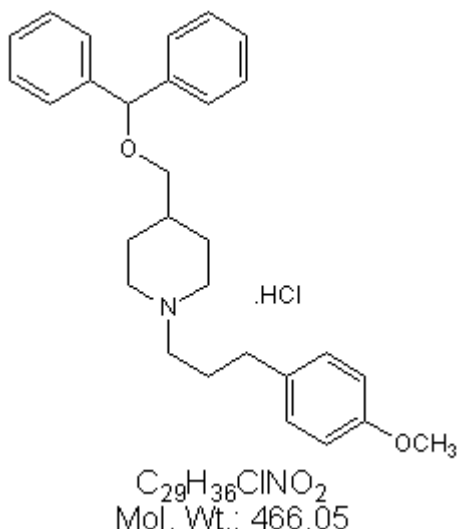
Batch Molecular Formula: C<sub>29</sub>H<sub>35</sub>NO<sub>2</sub>.HCl.½H<sub>2</sub>O

Batch Molecular Weight: 475.06

Physical Appearance: Off-white solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 50 mM  
ethanol to 30 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:**

**Hanson et al** (1999) UK-78,282, a novel piperidine compound that potently blocks the Kv1.3 voltage-gated potassium channel and inhibits human T cell activation. *Br.J.Pharmacol.* **126** 1707. PMID: 10372812.

**Chandy et al** (2001) Potassium channels in T lymphocytes: toxins to therapeutic immunosuppressants. *Toxicon* **39** 1269. PMID: 11384714.

**Chandy et al** (2004) K<sup>+</sup> channels as targets for specific immunomodulation. *Trends.Pharmacol.Sci.* **25** 280. PMID: 15120495.

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