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Print Date: Jan 13th 2016

Certificate of Analysis

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Product Name: **Rimcazole dihydrochloride** **Catalog No.: 1497** **Batch No.: 2**

CAS Number: 75859-03-9

IUPAC Name: 9-[3-(*cis*-3,5-Dimethyl-1-piperazinyl)propyl]-9*H*-carbazole dihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{21}H_{27}N_3.2HCl.H_2O$

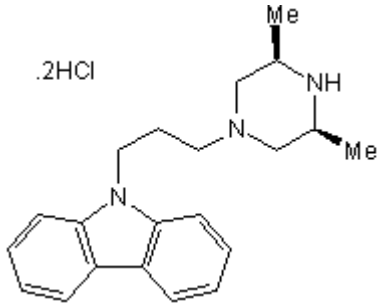
Batch Molecular Weight: 412.41

Physical Appearance: White solid

Solubility: water to 10 mM
1eq. HCl to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.66 (Dichloromethane:Methanol [85:15])

Melting Point: Between 260 - 262°C(dec)

HPLC: Shows 99.3% purity

^{1}H NMR: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	61.16	7.58	10.19	17.19
Found	61.48	7.24	10.18	17.31

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Description:

Antagonist at σ receptors (IC_{50} values are 1480 and 386 nM at σ_1 and σ_2 receptors respectively). Also binds to the dopamine transporter (IC_{50} = 57.6 nM) and inhibits dopamine uptake. Reduces the stimulatory effects of cocaine in vivo.

Physical and Chemical Properties:

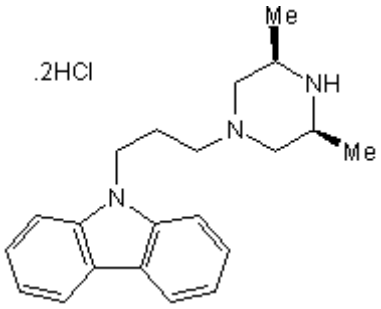
Batch Molecular Formula: $C_{21}H_{27}N_3.2HCl.H_2O$

Batch Molecular Weight: 412.41

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

water to 10 mM
1eq. HCl 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.

References:

Ferris *et al* (1986) Evidence that the potential antipsychotic agent rimcazole (BW 234U) is a specific, competitive antagonist of sigma sites in brain. Life Sci. ***38*** 2329. PMID: 2873494.

Husbands *et al* (1997) Isothiocyanate derivatives of 9-[3-(*cis*-3,5-dimethyl-1-piperazinyl)propyl]-carbazole (Rimcazole): irreversible ligands for the dopamine transporter. J.Med.Chem. ***40*** 4340. PMID: 9435903.

Matsumoto *et al* (2001) Rimcazole analogs attenuate the convulsive effects of cocaine: correlation with binding to sigma receptors rather than dopamine transporters. Neuropharmacology ***41*** 878. PMID: 11684152.

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