TOCRIS
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Print Date: Jan 15th 2016

Certificate of Analysis

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Product Name: **NGD 94-1** **Catalog No.: 3298** **Batch No.: 1**

CAS Number: 178928-68-2

IUPAC Name: 2-[4-[(2-Phenyl-1*H*-imidazol-5-yl)methyl]-1-piperazinyl]-pyrimidine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{18}H_{20}N_6.¼H_2O$

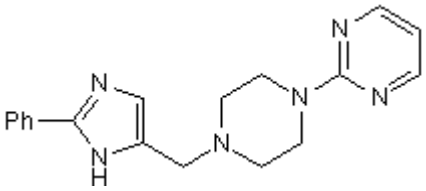
Batch Molecular Weight: 324.89

Physical Appearance: White solid

Solubility: 1eq. HCl to 100 mM
DMSO to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.8% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	66.54	6.36	25.87
Found	66.63	6.22	25.81

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

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Description:

High affinity D_4 receptor ligand; selective over D_1, D_2, D_3 and D_5 receptors. Displays antagonist activity at the human $D_{4.2}$ receptor (K_i = 3.6 nM in transfected CHO cells) and exhibits agonist activity at the $D_{4.4}$ receptor in HEK 293 cells.

Physical and Chemical Properties:

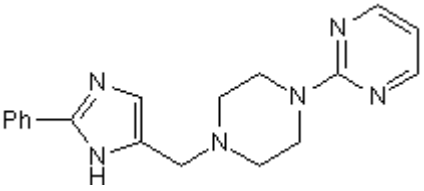
Batch Molecular Formula: $C_{18}H_{20}N_6.¼H_2O$

Batch Molecular Weight: 324.89

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

1eq. HCl to 100 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.

References:

Tallman *et al* (1997) I. NGD 94-1: Identification of a novel, high affinity antagonist at the human dopamine D_4 receptor. J.Pharmacol.Exp.Ther. ***282*** 1011. PMID: 9262370.

Primus *et al* (1997) II. Localization and characterization of dopamine D_4 binding sites in rat and human brain by use of the novel, D_4 receptor-selective ligand [^{3}H]NGD 94-1. J.Pharmacol.Exp.Ther. ***282*** 1020. PMID: 9262371.

Gazi *et al* (1999) NGD 94-1 as an agonist at human recombinant dopamine $D_{4.4}$ receptors expressed in HEK293 cells. Eur.J.Pharmacol. ***372*** R9. PMID: 10395031.

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

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