Certificate of Analysis

Product Name: **AF-DX 384** **Catalog No.: 1345** **Batch No.: 4**

CAS Number: 118290-26-9

IUPAC Name: *N*-[2-[2-[(Dipropylamino)methyl]-1-piperidinyl]ethyl]-5,6-dihydro-6-oxo-11*H*-pyrido[2,3-*b*][1,4]benzodiazepine-11-carboxamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{27}H_{38}N_6O_2$

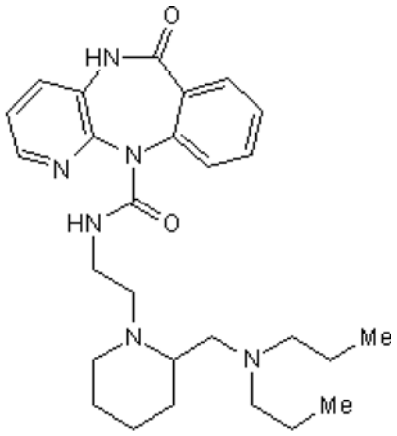
Batch Molecular Weight: 478.64

Physical Appearance: Pale yellow solid

Solubility: DMSO to 50 mM
ethanol to 10 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.17 (Dichloromethane:Methanol:Ammonia soln. [9:1:0.05])

HPLC: Shows 99.5% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	67.75	8	17.56
Found	67.5	7.91	17.62

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Description:

Potent M_2/M_4 selective antagonist (pK_i values are 8.22, 8.00, 7.51, 7.18 and 6.27 at human M_2, M_4, M_1, M_3 and M_5 receptors respectively).

Physical and Chemical Properties:

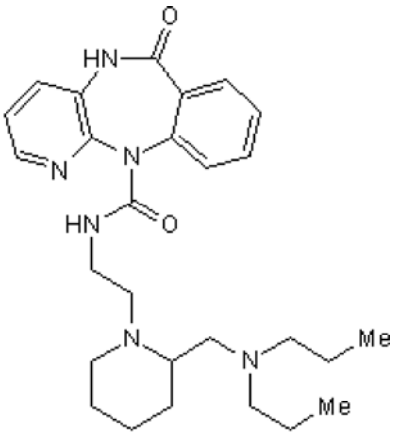
Batch Molecular Formula: $C_{27}H_{38}N_6O_2$

Batch Molecular Weight: 478.64

Physical Appearance: Pale yellow solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

DMSO to 50 mM
ethanol to 10 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:

Grailhe *et al* (2009) Regional changes in the cholinergic system in mice lacking monoamine A. Brain Res.Bull. ***78*** 283. PMID: 19111597.

Dopke *et al* (1995) AF-DX 384 binding in rabbit cingulate cortex: two site kinetics and section autoradiography. J.Pharmacol.Exp.Ther. ***274*** 562. PMID: 7616446.

Miller *et al* (1991) Binding of [^{3}H]AF-DX 384 to cloned and native muscarinic receptors. J.Pharmacol.Exp.Ther. ***259*** 601. PMID: 1941609.