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Print Date: Jan 11th 2016

Certificate of Analysis

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Product Name: **UCPH 101** **Catalog No.: 3490** **Batch No.: 4**

CAS Number: 1118460-77-7

IUPAC Name: 2-Amino-5,6,7,8-tetrahydro-4-(4-methoxyphenyl)-7-(naphthalen-1-yl)-5-oxo-4*H*-chromene-3-carbonitrile

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{27}H_{22}N_2O_3 \cdot \frac{1}{2}H_2O$

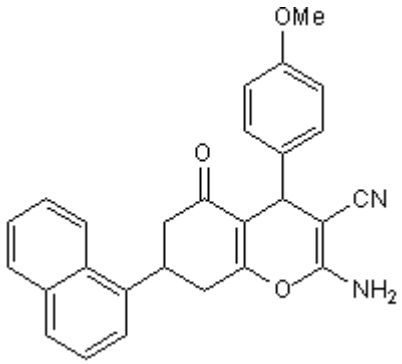
Batch Molecular Weight: 431.49

Physical Appearance: Pale yellow solid

Solubility: DMSO to 25 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.6 (Ethyl acetate:Petroleum ether [1:1])

HPLC: Shows 98% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	75.16	5.37	6.49
Found	74.87	5.31	6.37

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Description:

Selective non-substrate inhibitor of EAAT1 (IC_{50} values are 660, >300000 and >300000 nM for EAAT1, EAAT2 and EAAT3 respectively). Also demonstrates no significant inhibition at EAAT4 or EAAT5 in a patch-clamp electrophysiology assay (at final concentration up to 10 µM).

Physical and Chemical Properties:

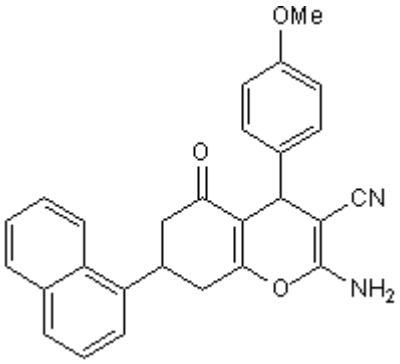
Batch Molecular Formula: $C_{27}H_{22}N_2O_3.½H_2O$

Batch Molecular Weight: 431.49

Physical Appearance: Pale yellow solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 25 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:

Jensen *et al* (2009) Discovery of the first selective inhibitor of excitatory amino acid transporter subtype 1. J.Med.Chem. ***52*** 912. PMID: 19161278.

Bunch *et al* (2009) Excitatory amino acid transporters as potential drug targets. Exp.Opin.Ther.Targets ***13*** 719.

Erichsen *et al* (2010) Structure-activity relationship study of first selective inhibitor of excitatory amino acid transporter subtype 1: 2-amino-4-(4-methoxyphenyl)-7-(naphthalen-1-yl)-5-oxo-5,6,7,8-tetrahydro-4*H*-chromene-3-carbonitrile (UCPH-101). J.Med.Chem. ***53*** 7180. PMID: 20857912.

Abrahamsen *et al* (2013) Allosteric modulation of an excitatory amino acid transporter: The subtype-selective inhibitor UCPH-101 exerts sustained inhibition of EAAT1 through an intramonomeric site in the trimerization domain. J.Neurosci. ***33*** 1068. PMID: 23325245.

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