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DATASHEET

UCPH 101

Product overview

Name	UCPH 101
Cat No	HB0630
Biological action	Inhibitor
Purity	>98%
Description	UCPH-101 is a potent, selective, non-competitive EAAT1 inhibitor

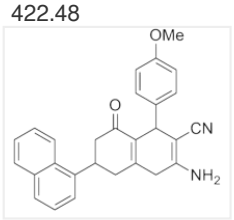
Biological Data

Biological description	UCPH-101 is a potent, selective, non-competitive inhibitor of the EAAT1 (Excitatory Amino Acid Transporter 1) glutamate transporter (IC_{50} = 660 nM). UCPH-101 shows >400-fold selectivity for EAAT1 over EAAT2 and EAAT3 and shows no inhibitory activity at EAAT4 and EAAT5 in a patch-clamp electrophysiology assay (in which final concentration was up to 10 μM). UCPH-102 which is blood brain barrier permeable is now also available.

Solubility & Handling

Storage instructions	+4 °C
Solubility overview	Soluble in DMSO (25mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	2-Amino-5,6,7,8-tetrahydro-4-(4-methoxyphenyl)-7-(naphthalen-1-yl)-5-oxo-4*H*-chromene-3-carbonitrile
Molecular Weight	422.48
Chemical structure	
Molecular Formula	$C_{27}H_{22}N_2O_3$
CAS Number	1118460-77-7
PubChem identifier	25223366
SMILES	COC1=CC=C(C=C1)C2C(=C(OC3=C2C(=O)CC(C3)C4=CC=CC5=CC=CC=C54)N)C#N
Source	Synthetic
InChi	InChI=1S/C27H22N2O3/c1-31-19-11-9-17(10-12-19)25-22(15-28)27(29)32-24-14-18(13-23(30)26(24)25)21-8-4-6-16-5-2-3-7-20(16)21/h2-12,18,25H,13-14,29H2,1H3
InChiKey	YBMGNDPBARCLFT-UHFFFAOYSA-N
Appearance	White solid

References

Discovery of the first selective inhibitor of excitatory amino acid transporter subtype 1.

Jensen AA *et al* (2009) J Med Chem 52(4)
PubMedID 19161278

Design, synthesis and pharmacological characterization of coumarin-based fluorescent analogs of excitatory amino acid transporter subtype 1 selective inhibitors, UCPH-101 and UCPH-102.

Huynh TH *et al* (2012) Bioorg Med Chem 20(23)
PubMedID 23072958

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.

Abrahamsen B *et al* (2013) J Neurosci 33(3)
PubMedID 23325245