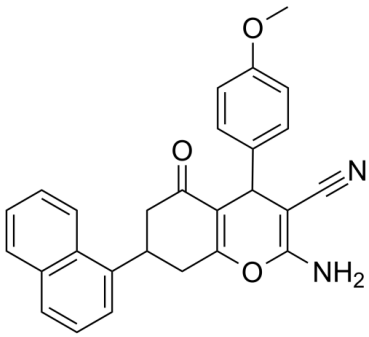
Data Sheet

Product Name:	UCPH-101
Cat. No.:	CS-7960
CAS No.:	1118460-77-7
Molecular Formula:	C27H22N2O3
Molecular Weight:	422.48
Target:	Others
Pathway:	Others
Solubility:	DMSO : 100 mg/mL (236.70 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

UCPH-101 is an **excitatory amino acid transporter subtype 1** (**EAAT1**) inhibitor with an **IC_{50}** of 0.66 μM. IC50 & Target: IC50: 0.66 μM (EAAT1)[1] **In Vitro:** UCPH-101 and UCPH-102 inhibit EAAT1 anion currents in a concentration-dependent manner, with K_D values of 0.34±0.03 μM (Hill=1.3±0.13, n≥9) for UCPH-101 and 0.17±0.02 μM (Hill=0.97±0.11, n≥7) for UCPH-102. A small but significant decrease in the total expression levels of both HA-EAAT1 and HA-GLAST is observed in cells preincubated with 100 μM UCPH-101 (p=0.048)[1].

PROTOCOL (Extracted from published papers and Only for reference)

Cell Assay: [1]Cells are split into poly-D-lysine-coated black 96-well plates with clear bottom. At 16 to 24 h later, the medium is aspirated, and the cells are washed with 100 μL Krebs buffer [140 mM NaCl/4.7 mM KCl/2.5 mM $CaCl_2$/1.2 mM $MgCl_2$/11 mM HEPES/10 mM D-glucose, pH 7.4]; 50 μL Krebs buffer supplemented with various concentrations of UCPH-101 or TBOA is added to the wells, after which an additional 50 μL Krebs buffer supplemented with the FMP assay dye (1 mg/mL) is added to each well. The plate is incubated at 37°C in a humidified 5% CO_2 incubator for 30 min and assayed in a reader measuring emission at 560 nm caused by excitation at 530 nm before and up to 1 min after addition of 33 μL Glu solution[1].

References:

[1]. Abrahamsen B, et al. 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. 2013 Jan 16;33(3):1068-87.

CAIndexNames:

4H-1-Benzopyran-3-carbonitrile, 2-amino-5,6,7,8-tetrahydro-4-(4-methoxyphenyl)-7-(1-naphthalenyl)-5-oxo-

SMILES:

O=C(C1)C2=C(OC(N)=C(C#N)C2C3=CC=C(OC)C=C3)CC1C4=CC=CC5=C4C=CC=C5

Caution: Product has not been fully validated for medical applications. For research use only.

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