UBP316

Cat. No.: HY-107601

CAS No.: 936095-50-0

Molecular Formula: $C_{20}H_{19}N_3O_6S$

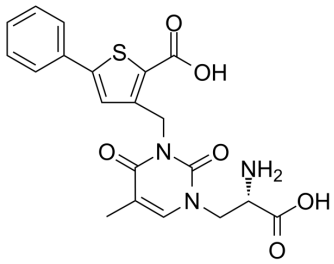
Molecular Weight: 429.45

Target: iGluR

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

1M NaOH : 80 mg/mL (186.28 mM; ultrasonic and adjust pH to 11 with NaOH)
DMSO : 2 mg/mL (4.66 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.3286 mL	11.6428 mL	23.2856 mL
5 mM	0.4657 mL	2.3286 mL	4.6571 mL
10 mM	0.2329 mL	1.1643 mL	2.3286 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 0.2 mg/mL (0.47 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 0.2 mg/mL (0.47 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 0.2 mg/mL (0.47 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

UBP316 (ACET) is a highly potent and selective kainate receptor GluK1 (GluR5) antagonist, with a K_b value of 1.4 nM. UBP316 is effective at blocking the depression of both field excitatory postsynaptic potentials (fEPSPs) and monosynaptically-evoked GABAergic transmission induced by ATPA, a GluK1 selective agonist[1].

IC_{50} & Target

Kb: 1.4 nM (GluK1)[1]

In Vitro	UBP316 is ineffective at GluK2 (GluR6) receptors at all concentrations tested (up to 100 μM) and had no effect at GluK3 (GluR7) when tested at 1 μM[1]. UBP316 (200 nM) reduces short-term facilitation of pre-synaptic calcium transients following repetitive spikes[1]. UBP316 effectively antagonises GluK1-mediated depression of excitatory transmission in CA1 region of the hippocampus in vitro[1]. UBP316 blocks induction of NMDA receptor-independent long-term potentiation (LTP)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Sheila L Dargan, et al. ACET is a highly potent and specific kainate receptor antagonist: Characterisation and effects on hippocampal mossy fibre function. Neuropharmacology. 2009 Jan;56(1):121-30.

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