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DATASHEET

ACET

Product overview

Name	ACET
Cat No	HB0102
Biological action	Antagonist
Purity	>98%
Description	Potent, selective GluK1 (GluR5) kainate receptor antagonist

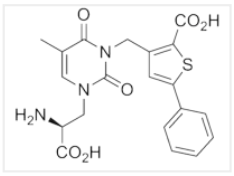
Biological Data

Biological description	Potent and selective GluK1 (GluR5) kainate receptor antagonist (K_b = 1.4 nM). Ineffective at GluK2, GluK3 and mGluR $_6$ and $_7$ receptors. Blocks NMDA receptor -independent long term potentiation induction.

Solubility & Handling

Storage instructions	Room temperature
Solubility overview	Soluble in NaOH(aq) (10mM)
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	(*S*)-1-(2-Amino-2-carboxyethyl)-3-(2 -carboxy-5-phenylthiophene-3-yl-methyl)-5-methylpyrimidine-2,4-dione
Molecular Weight	429.45
Chemical structure	
Molecular Formula	$C_{20}H_{19}N_3O_6S$
CAS Number	936095-50-0
PubChem identifier	16125102
SMILES	O=C(C(C)=CN1C[C@@H](C(O)=O)N)N(CC2=C(C(O)=O)SC(C3=CC=CC=C3)=C2)C1=O
InChiKey	LCZDCKMQSBGXAH-AWEZNQCLSA-N

References

ACET is a highly potent and specific kainate receptor antagonist: characterisation and effects on hippocampal mossy fibre function.

Dargan SL *et al* (2009) Neuropharmacology 56(1)
PubMedID 18789344

Effects of the selective kainate receptor antagonist ACET on altered sensorimotor gating in a genetic model of reduced NMDA receptor function.

Duncan GE *et al* (2012) Brain Res 1443
PubMedID 22297176

Synthesis and pharmacological characterization of N3-substituted willardiine derivatives: role of the substituent at the 5-position of the uracil ring in the development of highly potent and selective GLUK5 kainate receptor antagonists.

Dolman NP *et al* (2007) J Med Chem 50(7)
PubMedID 17348638