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DATASHEET

Fenobam

Product overview

Name	Fenobam
Cat No	HB0286
Biological action	Antagonist
Purity	>99%
Description	Potent, selective, non-competitive $mGlu_5$ antagonist

Images

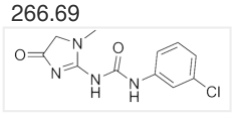
Biological Data

Biological description	Potent, selective and non-competitive $mGlu_5$ receptor antagonist. Acts at allosteric modulatory site (K_d values are 54 and 31 nM at rat and human $mGlu_5$ receptors respectively). Shows inverse agonist properties on receptor basal activity (IC_{50} value = 84 nM). Displays analgesic, anxiolytic and antidepressant effects. Orally active.

Solubility & Handling

Storage instructions	Room temperature
Solubility overview	Soluble in DMSO (100mM)
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	*N*-(3-Chlorophenyl)-*N*'-(4,5-dihydro-1-methyl-4-oxo-1*H*-imidazol-2-yl)urea
Molecular Weight	266.69
Chemical structure	
Molecular Formula	$C_{11}H_{11}N_4O_2Cl$
CAS Number	57653-26-6
PubChem identifier	162834
SMILES	CN1CC(=O)N=C1NC(=O)NC2=CC(=CC=C2)Cl

Source	Synthetic
InChi	InChI=1S/C11H11ClN4O2/c1-16-6-9(17)14-10(16)15-11(18)13-8-4-2-3-7(12)5-8/h2-5H,6H2,1H3,(H2,13,14,15,17,18)
InChiKey	DWPQODZAOSWNHB-UHFFFAOYSA-N
MDL number	MFCD00868019
Appearance	Yellow solid

References

Fenobam: a clinically validated nonbenzodiazepine anxiolytic is a potent, selective, and noncompetitive mGlu5 receptor antagonist with inverse agonist activity.

Porter RH *et al* (2005) J Pharmacol Exp Ther 315(2)
PubMedID 16040814

Antagonists at metabotropic glutamate receptor subtype 5: structure activity relationships and therapeutic potential for addiction.

Carroll FI (2008) Ann N Y Acad Sci 1141
PubMedID 18991960

The metabotropic glutamate receptor subtype 5 antagonist fenobam is analgesic and has improved in vivo selectivity compared with the prototypical antagonist 2-methyl-6-(phenylethynyl)-pyridine.

Montana MC *et al* (2009) J Pharmacol Exp Ther 330(3)
PubMedID 19515968