

Product Name: L-655,708

Catalog No.: 1327

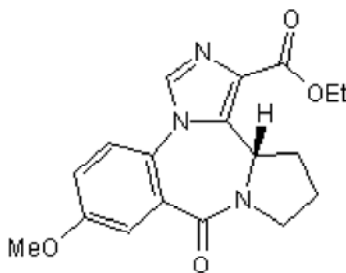
Batch No.: 6

CAS Number: 130477-52-0

IUPAC Name: 11,12,13,13a-Tetrahydro-7-methoxy-9-oxo-9H-imidazo[1,5-a]pyrrolo[2,1-c][1,4]benzodiazepine-1-carboxylic acid, ethyl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈H₁₉N₃O₄
Batch Molecular Weight: 341.37
Physical Appearance: Off White solid
Solubility: DMSO to 25 mM
Storage: Desiccate at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.38 (Ethyl acetate:Methanol [98:2])
HPLC: Shows 99.2% purity
Chiral HPLC: Shows >99.8% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	63.33	5.61	12.31
Found	63.08	5.62	12.26

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Potent, selective inverse agonist for the benzodiazepine site of GABA_A receptors containing the $\alpha 5$ subunit ($K_i = 0.45$ nM). Displays 50-100-fold selectivity over GABA_A receptors containing $\alpha 1$, $\alpha 2$, $\alpha 3$ or $\alpha 6$ subunits in combination with $\beta 3$ and $\gamma 2$. Enhances LTP in a mouse hippocampal slice model and increases spatial learning, without displaying proconvulsant activity.

Physical and Chemical Properties:

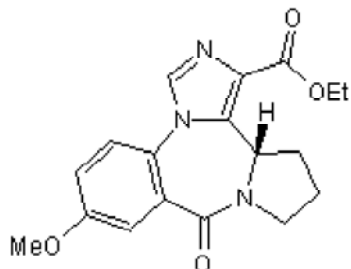
Batch Molecular Formula: C₁₈H₁₉N₃O₄

Batch Molecular Weight: 341.37

Physical Appearance: Off White solid

Minimum Purity: >98%

Batch Molecular Structure:



References:

Atack et al (2006) L-655,708 enhances cognition in rats but is not proconvulsant at a dose selective for $\alpha 5$ -containing GABA_A receptors. *Neuropharmacology* **51** 1023. PMID: 17046030.

Sur et al (1998) Rat and human hippocampal $\alpha 5$ subunit-containing γ -aminobutyric acid_A receptors have $\alpha 5\alpha 3\gamma 2$ pharmacological characteristics. *Mol.Pharmacol.* **54** 928. PMID: 9804628.

Quirk et al (1996) [³H]L-655,708, a novel ligand selective for the benzodiazepine site of GABA_A receptors which contain the $\alpha 5$ subunit. *Neuropharmacology* **35** 1331. PMID: 9014149.

Storage: Desiccate at +4°C

Solubility & Usage Info:

DMSO to 25 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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