Print Date: Jan 15th 2018

Certificate of Analysis

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Product Name: **GYKI 53655 hydrochloride** **Catalog No.: 2555** **Batch No.: 5**

CAS Number: 143692-48-2

IUPAC Name: 1-(4-Aminophenyl)-3-methylcarbamyl-4-methyl-3,4-dihydro-7,8-methylenedioxy-5*H*-2,3-benzodiazepine hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{19}H_{20}N_4O_3.HCl.1½H_2O$

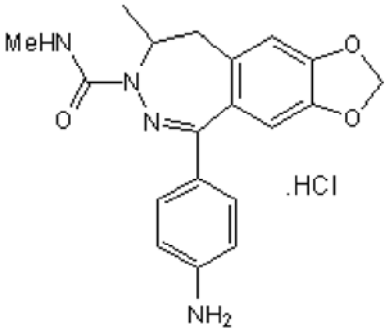
Batch Molecular Weight: 415.87

Physical Appearance: Yellow solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.8% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	54.87	5.82	13.47
Found	54.76	5.73	13.3

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Product Information

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CAS Number: 143692-48-2

IUPAC Name: 1-(4-Aminophenyl)-3-methylcarbamyl-4-methyl-3,4-dihydro-7,8-methylenedioxy-5*H*-2,3-benzodiazepine hydrochloride

Description:

Non-competitive AMPA and kainate receptor antagonist. Analog of GYKI 52466 (Cat. No. 1454). Prolongs the survival time after $MgCl_2$- induced global cerebral ischemia. Exhibits anticonvulsant activity. Also blocks GluK3 homomeric receptors (IC_{50} = 63 µM) and GluK2b(R)/GluK3 heteroreceptors (IC_{50} = 32 µM) at high concentrations.

Physical and Chemical Properties:

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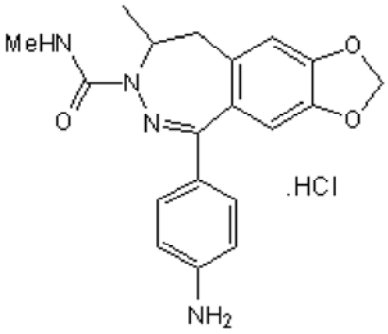
Batch Molecular Weight: 415.87

Physical Appearance: Yellow solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM
DMSO to 100 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.

References:

Perrais *et al* (2009) Antagonism of recombinant and native GluK3-containing kainate receptors. Neuropharmacology ***56*** 131. PMID: 18761361.

Szabados *et al* (2001) Comparison of anticonvulsive and acute neuroprotective activity of three 2,3-benzodiazepine compounds, GYKI 52466, GYKI 53405, and GYKI 53655. Brain Res.Bull. ***55*** 387. PMID: 11489346.

Paternain *et al* (1995) Selective antagonism of AMPA receptors unmasks kainate receptor-mediated responses in hippocampal neurons. Neuron ***14*** 185. PMID: 7826635.