Certificate of Analysis

Product Name: **ZK 200775** **Catalog No.: 2345** **Batch No.: 1**

CAS Number: 161605-73-8

IUPAC Name: [[3,4-Dihydro-7-(4-morpholinyl)-2,3-dioxo-6-(trifluoromethyl)-1(2*H*)-quinoxalinyl]methyl]phosphonic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{14}H_{15}N_3O_6F_3P.¼H_2O$

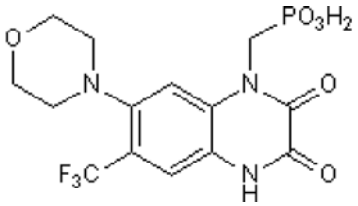
Batch Molecular Weight: 413.75

Physical Appearance: White solid

Solubility: DMSO to 100 mM
ethanol to 50 mM

Storage: Desiccate at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.13 (Dichloromethane:Methanol [2:1])

HPLC: Shows 99.4% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	40.64	3.78	10.16
Found	40.57	3.8	10.03

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Description:

ZK 200775 is a competitive AMPA/kainate antagonist. In rat cortical membranes, displays high affinity for [^{3}H]-AMPA (K_i = 120 nM) and [^{3}H]-CNQX (K_i = 32 nM) binding sites and low affinity for kainate and NMDA channel-associated binding sites (IC_{50} values range from 2.5 to 11 µM). Inhibits currents induced by AMPA, Kainate and NMDA with IC_{50} values of 21 nM, 27 nM, and > 1 µM respectively. Displays anxiolytic, anticonvulsant and muscle relaxant activity in vivo. Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

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Physical Appearance: White solid

Minimum Purity: ≥99%

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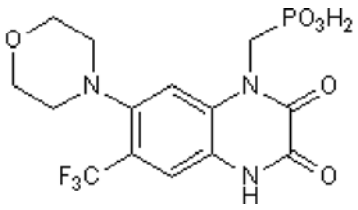

Storage: Desiccate at +4°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 50 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:

Sobolevsky (2009) X-ray structure, symmetry and mechanism of an AMPA-subtype glutamate receptor. Nature ***462*** 745. PMID: 19946266.

Elger *et al* (2005) Novel α-amino-3-hydroxy-5-methyl-4-isoxazole propionate (AMPA) receptor antagonists of 2,3-benzodiazepine type: chemical synthesis, in vitro characterization, and in vivo prevention of acute neurodegeneration. J.Med.Chem. ***48*** 4618. PMID: 15999999.

Kosowski *et al* (2004) Nicotine-induced DA release in the nucleus accumbens is inhibited by the novel AMPA antagonist ZK200775 and the NMDA antagonist CGP39551n Pychopharmacology ***175*** 114.

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