bio-techne
TOCRIS

Print Date: Jul 29th 2024

Certificate of Analysis

www.tocris.com

Product Name: **CNQX disodium salt** **Catalog No.: 1045** **Batch No.: 28**

CAS Number: 479347-85-8

IUPAC Name: 6-Cyano-7-nitroquinoxaline-2,3-dione disodium

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_9H_2N_4O_4Na_2.2¾H_2O$

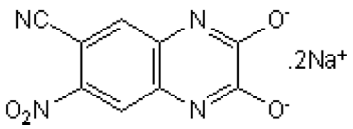
Batch Molecular Weight: 325.66

Physical Appearance: Orange/brown solid

Solubility: water to 10 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.6% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	33.19	2.32	17.2
Found	33.04	2.36	16.68

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

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

Product Name: **CNQX disodium salt** **Catalog No.: 1045** **28**

CAS Number: 479347-85-8

IUPAC Name: 6-Cyano-7-nitroquinoxaline-2,3-dione disodium

Description:

CNQX disodium salt is a more water-soluble disodium salt of the AMPA and kainate antagonist CNQX (Cat. No. 0190), which is an AMPA and kainate receptor antagonist (IC_{50} values are 0.3 µM, 1.5 µM for AMPA and kainate receptors, respectively). CNQX is also an antagonist at the glycine modulatory site on the NMDA receptor complex (IC_{50} = 25 µM). CNQX can be used to isolate $GABA_A$ receptor mediated spontaneous inhibitory postsynaptic currents and antagonizes non-NMDA receptor-mediated responses in cultured cerebellar granule cells. CNQX shows neuroprotective effects in models of ischemia and inhibits seizure-like activity in hippoca... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

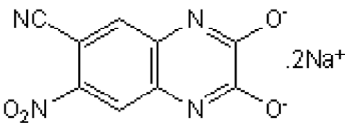
Batch Molecular Formula: $C_9H_2N_4O_4Na_2.2¾H_2O$

Batch Molecular Weight: 325.66

Physical Appearance: Orange/brown solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 10 mM

CAUTION - This product is hygroscopic and we recommend that it is desiccated upon arrival. Solutions should be made up as soon as the vial is opened. This product may take on an orange to red colouration if hydrated. This will not affect product quality. When purchsed as a 1mg unit, this product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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:

King *et al* (1992) Antagonism of synaptic potentials in ventral horn neurones by 6-cyano-7-nitroquinoxaline-2,3-dione: a study in the rat spinal cord *in vitro*. Br.J.Pharmacol. ***107*** 375. PMID: 1358390.

Long *et al* (1990) Effect of 6-cyano-2,3-dihydroxy-7-nitro-quinoxaline (CNQX) on dorsal root-, NMDA-, kainate and quisqualate-mediated depolarization of rat motoneurones *in vitro*. Br.J.Pharmacol. ***100*** 850. PMID: 1976402.

Watkins *et al* (1990) Structure-activity relationships in the development of excitatory amino acid receptor agonists and competitive antagonists. TiPS ***11*** 25. PMID: 2155495.

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956