

Product Name: NBQX disodium salt

Catalog No.: 1044

Batch No.: 42

CAS Number: 479347-86-9

IUPAC Name: 2,3-Dioxo-6-nitro-1,2,3,4-tetrahydrobenzo[f]quinoxaline-7-sulfonamide disodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₂H₆N₄O₆SNa₂·2½H₂O

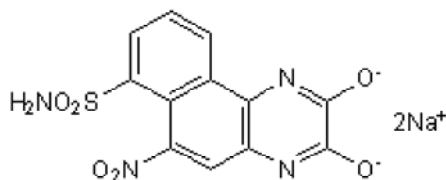
Batch Molecular Weight: 425.28

Physical Appearance: Dark brown solid

Solubility: water to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.8% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	33.89	2.61	13.17
Found	33.65	2.39	12.69

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

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Description:

NBQX disodium salt is a selective and competitive AMPA and kainate receptor antagonist (IC_{50} = 0.15 μ M and 4.8 μ M, respectively). NBQX blocks the antidepressant effects of 8-Hydroxy-DPAT hydrobromide (Cat. No. 0529), decreases mTOR and BDNF levels. NBQX is neuroprotective, anticonvulsant, antinociceptive and active in vivo. NBQX disodium salt is a more water-soluble form of NBQX (Cat. No. 0373).

Physical and Chemical Properties:

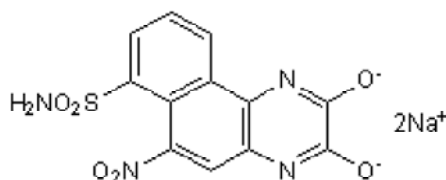
Batch Molecular Formula: $C_{12}H_6N_4O_6SNa_2 \cdot 2\frac{1}{2}H_2O$

Batch Molecular Weight: 425.28

Physical Appearance: Dark brown solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

water to 100 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 purchased 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. 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.

Licensing Information:

Sold with the permission of Novo Nordisk A/S

References:

Yoon *et al* (2005) Antinociceptive interactions between intrathecal gabapentin and MK801 or NBQX in rat formalin test J.Korean Med.Sci. **20** 307. PMID: 15832006.

Namba *et al* (1994) Antiepileptogenic and anticonvulsant effects of NBQX, a selective AMPA receptor antagonist, in the rat kindling model of epilepsy. Brain Res. **638** 36. PMID: 8199874.

Sheardown *et al* (1993) The pharmacology of AMPA receptors and their antagonists. Stroke **24** 146. PMID: 7504337.

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