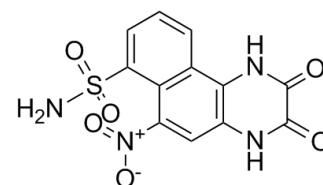


Data Sheet

Product Name:	NBQX
Cat. No.:	CS-0003737
CAS No.:	118876-58-7
Molecular Formula:	C ₁₂ H ₈ N ₄ O ₆ S
Molecular Weight:	336.28
Target:	iGluR
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Solubility:	DMSO : ≥ 75 mg/mL (223.03 mM); H ₂ O : < 0.1 mg/mL (insoluble)



BIOLOGICAL ACTIVITY:

NBQX is a highly selective and competitive **AMPA receptor** antagonist.

IC₅₀ & Target: AMPA receptor^[1]

In Vitro: NBQX has a high affinity for AMPA and kainate binding sites with little or no affinity for the glutamate recognition site on the NMDA receptor complex^[1].

In Vivo: NBQX is neuroprotective in a focal ischaemia model in the rat when given as an i.v. bolus dose of 30 mg/kg at the time of MCA occlusion and again at 1 h post occlusion^[1]. NBQX provides potent anticonvulsant protection against AMPA. The **ED₅₀** values for the protection against AMPA-induced seizures by NBQX (30 min, i.p.) is 23.6 (11.6- 48.0)^[2].

PROTOCOL (Extracted from published papers and Only for reference)

Animal Administration: ^[1]Rats^[1]

Male Sprague-Dawley rats weighing 350-390 g are used for study. 30 mg/kg of NBQX (2x15 mg/mL) is administered i.v. as a bolus dose followed by an infusion of 10 mg/kg/h for 4 h, the bolus dose and infusion are started immediately after MCA occlusion. Blood samples are taken from these animals at 1, 2, 3 and 4 h after the start of the infusion and the plasma level of NBQX in each sample is measured^[1].

Mice^[1]

The time course for the anticonvulsant action of NBQX and of GYKI 52466 against AMPA-induced seizures is determined by pretreating groups (n=10) of Swiss mice with 30 and 60/zmol/kg NBQX or GYKI 52466 (i.p.) 15-120 min before challenging the mice with a convulsant dose of AMPA (5 nmol) i.c.v.^[2].

References:

[1]. Fukushima K, et al. Characterization of Human Hippocampal Neural Stem/Progenitor Cells and Their Application to Physiologically Relevant Assays for Multiple Ionotropic Glutamate Receptors. J Biomol Screen. 2014 Sep; 19(8):1174-84.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 732-484-9848 Fax: 888-484-5008 E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA