

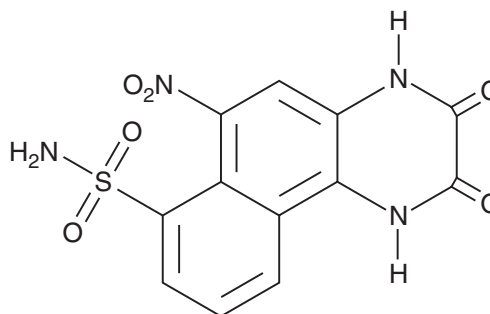
PRODUCT INFORMATION



NBQX

Item No. 38281

CAS Registry No.: 118876-58-7
Formal Name: 1,2,3,4-tetrahydro-6-nitro-2,3-dioxo-benzo[f]quinoxaline-7-sulfonamide
Synonym: FG-9202
MF: C₁₂H₈N₄O₆S
FW: 336.3
Purity: ≥98%
UV/Vis.: λ_{max}: 216, 257, 286, 380 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

NBQX is supplied as a solid. A stock solution may be made by dissolving the NBQX in the solvent of choice, which should be purged with an inert gas. NBQX is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of NBQX in DMSO is approximately 20 mg/ml. NBQX is slightly soluble in ethanol and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of NBQX can be prepared by directly dissolving the solid in aqueous buffers. The solubility of NBQX in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

NBQX is an antagonist of AMPA and kainate receptors (IC₅₀s = 0.15 and 4.8 μM, respectively).¹ It is selective for these receptors over NMDA receptors (IC₅₀ = ≥90 μM). *In vivo*, NBQX (20 mg/kg) increases the latency to seizures, decreases the duration of seizures, and reduces seizure severity in a rat model of epilepsy induced by pentylenetetrazole (PTZ; Item No. 18682).² It also suppresses relapse phase nicotine self-administration in rats.³

References

1. Sheardown, M.J., Nielsen, E.O., Hansen, A.J., *et al.* 2,3-Dihydroxy-6-nitro-7-sulfamoyl-benzo(F) quinoxaline: A neuroprotectant for cerebral ischemia. *Science* **247(4942)**, 571-574 (1990).
2. Chen, W., Li, Y.-S., Gao, J., *et al.* AMPA receptor antagonist NBQX decreased seizures by normalization of perineuronal nets. *PLoS One* **11(11)**, e0166672 (2016).
3. Ruda-Kucerova, J., Amchova, P., Siska, F., *et al.* NBQX attenuates relapse of nicotine seeking but not nicotine and methamphetamine self-administration in rats. *World J. Biol. Psychiatry* **22(10)**, 733-743 (2021).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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