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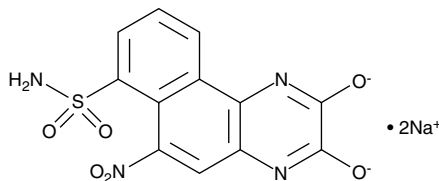
Product Information



NBQX (sodium salt)

Item No. 14914

CAS Registry No.: 479347-86-9
Formal Name: 1,2,3,4-tetrahydro-6-nitro-2,3-dioxo-benzo[f]quinoxaline-7-sulfonamide, disodium salt
MF: $C_{12}H_6N_4O_6S \cdot 2Na$
FW: 380.2
Purity: $\geq 98\%$
Stability: ≥ 2 years at $-20^\circ C$
Supplied as: A crystalline solid
UV/Vis.: λ_{max} : 220, 271, 296, 357, 426 nm



Laboratory Procedures

For long term storage, we suggest that NBQX (sodium salt) be stored as supplied at $-20^\circ C$. It should be stable for at least two years.

NBQX (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the NBQX (sodium salt) in the solvent of choice. NBQX (sodium salt) is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of NBQX (sodium salt) in these solvents is approximately 20 and 1 mg/ml, respectively.

NBQX (sodium salt) is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Ionotropic glutamate receptors can be divided into three groups, depending on whether they are activated by α -amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA), kainate, or N-methyl-D-aspartate (NMDA). NBQX is a water-soluble receptor antagonist which targets both AMPA- and kainate-sensitive glutamate receptors ($IC_{50} = 0.15$ and $4.8 \mu M$, respectively).¹ It does not block the NMDA-sensitive glutamate receptor ($IC_{50} = \geq 90 \mu M$).¹ NBQX can be used in isolated neurons, tissues, or *in vivo*.²⁻⁵

References

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3. Bertollini, C., Murana, E., Mosca, L., *et al.* Transient increase in neuronal chloride concentration by neuroactive aminoacids released from glioma cells. *Front. Mol. Neurosci.* **5**, 100 (2012).
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5. Pomierny-Chamiolo, L., Poleszak, E., Pilc, A., *et al.* NMDA but not AMPA glutamatergic receptors are involved in the antidepressant-like activity of MTEP during the forced swim test in mice. *Pharmacol. Rep.* **62**(6), 1186-1190 (2010).

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