Small	NBQX (Sodium Salt)	STENCELL <sup>M</sup>
Molecules	AMPA receptor antagonist	Scientists Helping Scientists <sup>™</sup>   WWW.STEMCELL.COM
		TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
Catalog #100-0891	10 mg	FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

### **Product Description**

NBQX is a neuroprotective agent and a potent and competitive AMPA receptor antagonist ( $IC_{50} = 0.15 \mu M$ ; Sheardown et al.). AMPA receptors are cation channels and ionotropic glutamate transmembrane receptors that play an important role in the function of the human nervous system, such as in learning and memory (Gouaux). AMPA receptors are therapeutic targets for neurological diseases (Chang et al.).

Alternative Names:	Not applicable
CAS Number:	479347-86-9
Chemical Formula:	$C_{12}H_6N_4O_6S \bullet 2Na$
Molecular Weight:	380.2 g/mol
Purity:	≥ 98%
Chemical Name:	1,2,3,4-tetrahydro-6-nitro-2,3-dioxo-benzo[f]quinoxaline-7-sulfonamide, disodium salt
Structure:	



# Properties

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Storage:	Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For long-term storage, store with a desiccant. Stable as supplied for 12 months from date of receipt.
Physical Appearance:	A crystalline solid

Solubility:

 $\cdot$  DMSO  $\leq$  50 mM

For example, to prepare a 10 mM stock solution in DMSO, resuspend 10 mg in 2.63 mL of DMSO.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.



## Published Applications

DISEASE MODELING

· Reduces cerebral ischemic necrosis in the hippocampus (Gaspary et al.).

#### References

Chang PK-Y et al. (2012) AMPA receptors as drug targets in neurological disease--advantages, caveats, and future outlook. Eur J Neurosci 35(12): 1908–16.

Gaspary HL et al. (1994) BW1003C87 and NBQX but not CGS19755 reduce glutamate release and cerebral ischemic necrosis. Eur J Pharmacol 262(3): 197–203.

Gouaux E. (2004) Structure and function of AMPA receptors. J Physiol 554(Pt 2): 249-53.

Sheardown MJ et al. (1990) 2,3-Dihydroxy-6-nitro-7-sulfamoyl-benzo(F)quinoxaline: a neuroprotectant for cerebral ischemia. Science 247(4942): 571–4.

## **Related Small Molecules**

For a complete list of small molecules available from STEMCELL Technologies, visit www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.

## This product is hazardous. Please refer to the Safety Data Sheet (SDS).

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