

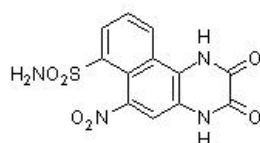
## Product datasheet

# NBQX, AMPA / kainate antagonist ab120045

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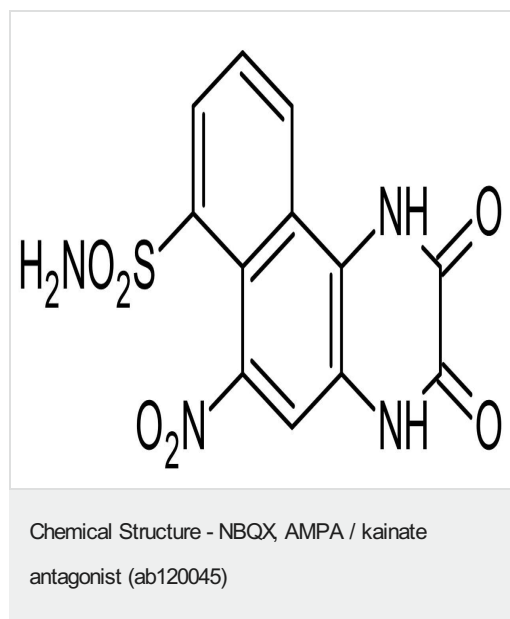
### Overview

Product name	NBQX, AMPA / kainate antagonist
Description	AMPA / kainate antagonist
Biological description	Potent, selective and competitive AMPA/kainate receptor antagonist. Neuroprotective and anticonvulsant <i>in vivo</i> . Water-soluble form available - please see NBQX disodium salt ( <a href="#">ab120046</a> ).
CAS Number	118876-58-7
Chemical structure	

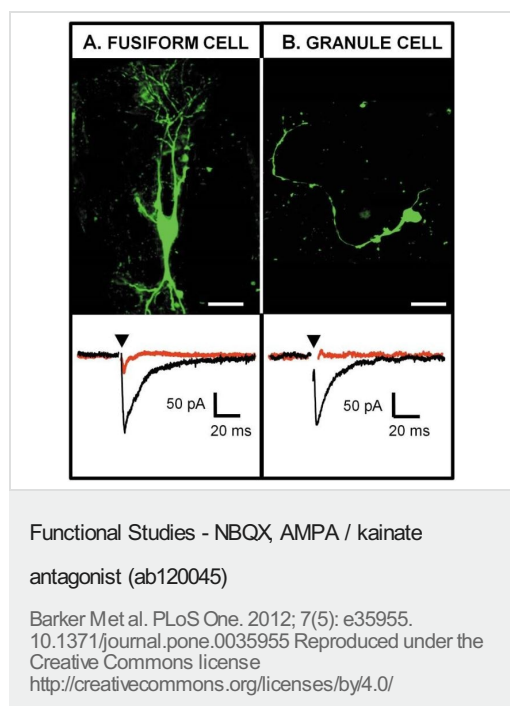


### Properties

Chemical name	2,3-Dioxo-6-nitro-1,2,3,4-tetrahydrobenzo[f]quinoxaline-7-sulfonamide
Molecular weight	336.28
Molecular formula	C <sub>12</sub> H <sub>8</sub> N <sub>4</sub> O <sub>6</sub> S
PubChem identifier	3272524
Storage instructions	Store at +4°C. Store under desiccating conditions. The product can be stored for up to 12 months.
Solubility overview	Soluble in DMSO to 100 mM
Handling	<p>Wherever possible, you should prepare and use solutions on the same day. However, if you need to make up stock solutions in advance, we recommend that you store the solution as aliquots in tightly sealed vials at -20°C. Generally, these will be useable for up to one month. Before use, and prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour.</p> <p>Refer to SDS for further information.</p> <p>Need more advice on solubility, usage and handling? Please visit our <a href="#">frequently asked questions (FAQ) page</a> for more details.</p>
SMILES	[O-][N+](=O)c2cc3NC(=O)C(=O)Nc3c1cccc(c12)S(N)(=O)=O
Source	Synthetic



2D chemical structure image of ab120045, NBQX, AMPA / kainate antagonist

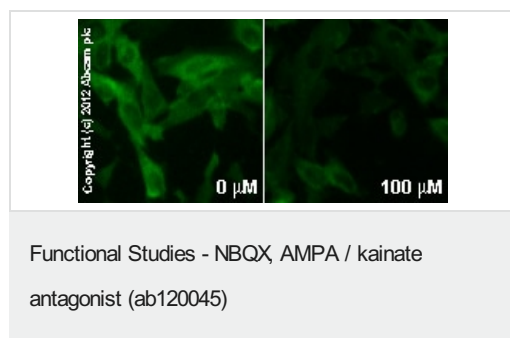


A - Photomicrograph of a DCN fusiform cell filled with lucifer yellow (top) and whole cell voltage clamp recording of this fusiform cell while stimulating the LVN (bottom).

B - Photomicrograph of a DCN granule cell filled with lucifer yellow (top) and whole cell voltage clamp recording of this granule cell while stimulating the LVN (bottom)

Both cells were held at  $-68$  mV and the LVN was stimulated at 0.3 Hz. Glutamatergic EPSCs are represented in black and are blocked by 50  $\mu$ M D-AP5 and 10  $\mu$ M NBQX (ab120045, traces in red). Each trace represents an average of 10–20 single traces. The arrowhead represents the artifact of stimulus that has been removed for clarity. Scale bar: (A) 50  $\mu$ m, (B) 20  $\mu$ m

Credit: Barker M et al. PLoS One. 2012; 7(5): e35955.  
10.1371/journal.pone.0035955



**ab96379** staining MEK1 (phospho S298) in SK-N-SH cells treated with NBQX (ab120045), by ICC/IF. Decrease in MEK1 (phospho S298) expression correlates with increased concentration of NBQX, as described in literature.

The cells were incubated at 37°C for 1h in media containing different concentrations of ab120045 (NBQX) in DMSO, fixed with 4% formaldehyde for 10 minutes at room temperature and blocked with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and

0.1% tween for 2h at room temperature. Staining of the treated cells with **ab96379** (1/100 dilution) was performed overnight at 4°C in PBS containing 1% BSA and 0.1% tween. A DyLight 488 goat anti-rabbit polyclonal antibody (**ab96899**) at 1/250 dilution was used as the secondary antibody.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES, NOT FOR USE IN HUMANS"

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