Hello Bio, Inc.
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500
F. 609-228-4994

customercare-usa@m2stage.hellobio.com

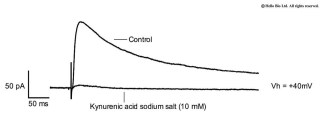
DATASHEET

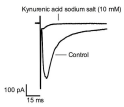
Kynurenic acid sodium salt

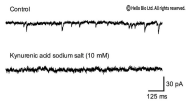
Product overview

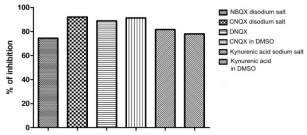
Name	Kynurenic acid sodium salt
Cat No	HB0363
Biological action	Antagonist
Purity	>98%
Customer comments	*Good and convenient. The substance we purchased (Kynurenic acid sodium salt) showed good chemical quality and much more convenient in respect to other sellers. Ordering is very easy and shipment is fast and safe.* **Verified customer, Unife**
Description	Endogenous ionotropic glutamate / nicotinic antagonist. Sodium salt.

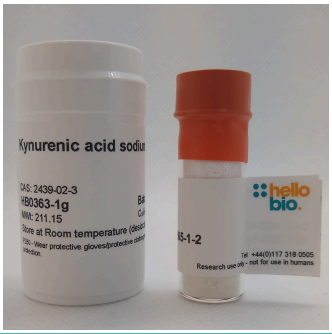
Images











Biological Data

Biological description	Endogenous, non-selective ionotropic glutamate receptor antagonist which acts as a non-competitive glycine site NMDAR antagonist. Also an α7 nicotinic receptor antagonist and GPR35 ligand. Sodium salt. Blocks kainic acid neurotoxicity and displays neuroprotective, antiproliferative and antimigrative properties.
Application notes	Kynurenic acid is commonly used as an AMPA/NMDA receptor antagonist. Kynurenic acid is commonly used at concentration of 10mM. Kynurenic acid from Hello Bio rapidly inhibits both NMDA and AMPA mediated spontaneous and evoked EPSCs at concentrations of 10mM (see Fig 1 above).

#Protocol 1: Evoked NMDA receptor currents

- Whole cell voltage clamp recordings were obtained from layer V neurons of the

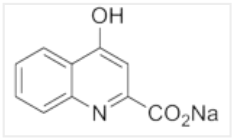
mouse prelimbic cortex brain slice.

- NMDA currents were evoked via a stimulating electrode placed in layers II/III and evoked by a single square (150 µs) pulse every 10 sec at a stimulus intensity that gave a reliable NMDA current.
- Neurons were held a +40 mV to relieve NMDA currents from their voltage-dependent Mg^{2+} block.
- NMDA currents were continually stimulated and recorded in response to continual bath applications of NMDAR antagonists until NMDA currents were completely abolished. If the concentration was not effective an addition experiment was conducted using an alternative concentration.
- All NMDAR recordings were made in the presence of $GABA_A$-R and AMPAR antagonists.

Solubility & Handling

Storage instructions	Room temperature (desiccate)
Solubility overview	Soluble in water (100mM) or DMSO (50mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	4-Hydroxyquinoline-2-carboxylic acid sodium salt
Molecular Weight	211.15
Chemical structure	
Molecular Formula	$C_{10}H_6NNaO_3$
CAS Number	2439-02-3
PubChem identifier	52974250
SMILES	C1=CC=C2C(=C1)C(=O)C=C(N2)C(=O)[O-].[Na+]
Source	Synthetic
InChi	InChI=1S/C10H7NO3.Na/c12-9-5-8(10(13)14)11-7-4-2-1-3-6(7)9;/h1-5H,(H,11,12)(H,13,14);/q;+1/p-1
InChiKey	RCAZGXKUQDXSSK-UHFFFAOYSA-M
MDL number	MFCD00006753
Appearance	Pale solid

References

6-Hydroxykynurenic acid and kynurenic acid differently antagonise AMPA and NMDA receptors in hippocampal neurones.

Weber M *et al* (2001) J Neurochem 77(4)
PubMedID 11359876

Kynurenic acid inhibits proliferation and migration of human glioblastoma T98G cells.

Walczak K *et al* (2014) Pharmacol Rep 66(1)
PubMedID 24905318

Kynurenate is neuroprotective following experimental brain injury in the rat.

Hicks RR *et al* (1994) Brain Res 655(1-2)
PubMedID 7812795

Pharmacological characterization of glutamatergic agonists and antagonists at recombinant human homomeric and heteromeric kainate receptors in vitro.

Alt et al (2004) Neuropharmacology 46(6)

PubMedID	15033339