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DATASHEET

Kynurenic acid sodium salt

Product overview

Name Kynurenic acid sodium salt

Cat No HB0363
Biological action Antagonist
Purity >98%

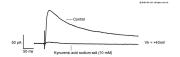
Customer comments Good and convenient. The substance we purchased (Kynurenic acid sodium salt) showed good

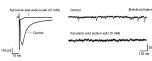
chemical quality and much more convenient in respect to other sellers. Ordering is very easy and

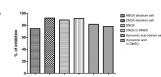
shipment is fast and safe. Verified customer, Unife

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 $\alpha 7$ 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 Mg²⁺ 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

Solubility overview Storage instructions

Soluble in water (100mM) or DMSO (50mM)

Room temperature (desiccate)

Storage of solutions Prepare and use solutions on the same day if possible. Store solutions at -20 °C for up to one month if

storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.

Shipping Conditions Stable for ambient temperature shipping. Follow storage instructions on receipt.

This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not

for human or veterinary use.

Chemical Data

Important

Chemical name 4-Hydroxyquinoline-2-carboxylic acid sodium salt

Molecular Weight 211.15
Chemical structure

OH N CO₂Na

Molecular Formula $C_{10}H_6NNaO_3$ CAS Number2439-02-3PubChem identifier52974250

SMILES C1=CC=C2C(=C1)C(=O)C=C(N2)C(=O)[O-].[Na+]

Source Synthetic

InChiKey RCAZGXKUQDXSSK-UHFFFAOYSA-M

MDL numberMFCD00006753AppearancePale 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**781279

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

Alt et al (2004) Neuropharmacology 46(6)