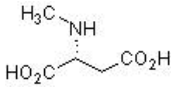
abcam

Product datasheet

NMDA, excitotoxic amino acid ab120052

17 References 3 Images

Overview

Product name	NMDA, excitotoxic amino acid
Description	Excitotoxic amino acid
Biological description	Excitotoxic amino acid. Prototypic agonist at the ionotropic NMDA glutamate receptor which is involved in long-term potentiation, ischemia, and epilepsy. Also available in Kit: Ionotropic agonists (**ab120323**). Also available in simple stock solutions (**ab146698**) - add 1 ml of water to get an exact, ready-to-use concentration.
CAS Number	6384-92-5
Chemical structure	

Properties

Chemical name	(*R*)-2-(Methylamino)succinic acid
Molecular weight	147.13
Molecular formula	$C_5H_9NO_4$
PubChem identifier	22880
Storage instructions	Store at +4°C. Store under desiccating conditions. The product can be stored for up to 12 months.
Solubility overview	Soluble in water to 100 mM
Handling	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. Refer to SDS for further information Need more advice on solubility, usage and handling? Please visit our **frequently asked questions (FAQ) page** for more details.
SMILES	OC(=O)C[C@@H](NC)C(=O)O

Source Synthetic

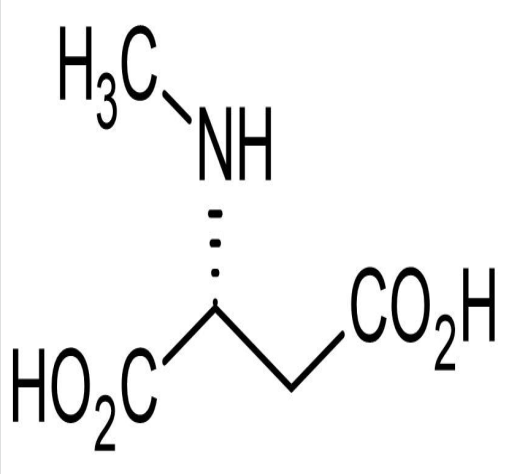
Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab120052 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

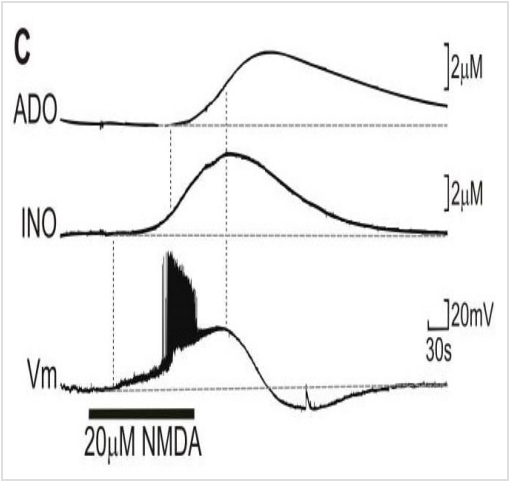
Application	Abreviews	Notes
Functional Studies		Use at an assay dependent concentration.

Images



Chemical Structure - NMDA, excitotoxic amino acid (ab120052)

2D chemical structure image of ab120052, NMDA, excitotoxic amino acid

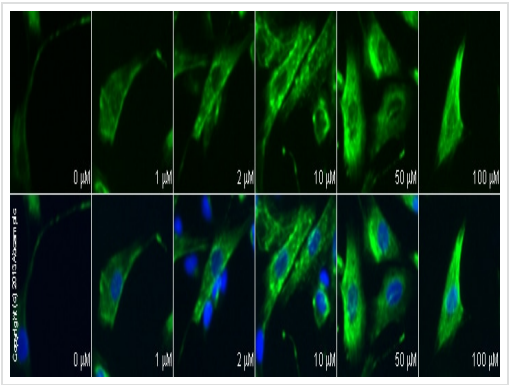


Functional Studies - NMDA, excitotoxic amino acid (ab120052)

Sims et al PLoS One. 2013;8(1):e53814. doi: 10.1371/journal.pone.0053814. Epub 2013 Jan 11. Fig 1. Reproduced under the Creative Commons license http://creativecommons.org/licenses/by/4.0/

Release of adenosine by depolarisation and agonists.

(Panel c) NMDA application also evoked neuronal depolarisation and firing accompanied by subsequent release of adenosine and inosine.



Immunocytochemistry/ Immunofluorescence - NMDA, excitotoxic amino acid (ab120052)

ab55051 staining GABA B receptor 1 in SK-N-SH cells treated with NMDA (ab120052), by ICC/IF. Internalization of GABA B receptor 1 correlates with increased concentration of NMDA, as described in literature.

The cells were incubated at 37°C for 30 minutes in media containing different concentrations of ab120052 (NMDA) 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 **ab55051** (1 µg/ml) was performed overnight at 4°C in PBS containing 1% BSA and 0.1% tween. A DyLight 488 goat anti-mouse polyclonal antibody (**ab96879**) at 1/250 dilution was used as the secondary antibody. Nuclei were counterstained with DAPI and are shown in blue.

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