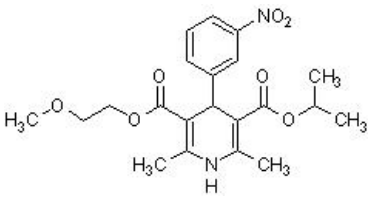
abcam

Product datasheet

Nimodipine, L-type Ca2+ channel blocker ab120138

4 References 2 Images

Overview

Product name	Nimodipine, L-type Ca2+ channel blocker
Description	L-type Ca^{2+} channel blocker
Biological description	L-type Ca^{2+} channel blocker. Potent cerebrovasodilator. Cognitive enhancer. More lipophilic than nifedipine (**ab120135**).
General notes	Nimodipine is light sensitive and it is recommended that the compound is protected from light.
CAS Number	66085-59-4
Chemical structure	

Properties

Chemical name	1,4-Dihydro-2,6-dimethyl-4-(3-nitrophenyl)-3,5-pyridinedicarboxylic acid 2-methoxyethyl 1-methylethyl ester
Molecular weight	418.44
Molecular formula	$C_{21}H_{26}N_2O_7$
PubChem identifier	4497
Storage instructions	Store at Room Temperature. The product can be stored for up to 12 months.
Solubility overview	Soluble in DMSO to 100 mM and in ethanol to 10 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. Toxic, 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	CC=1NC(C)=C(C(C=1C(=O)OC(C)C)c2cccc(c2)[N+]([O-])=O)C(=O)OCCOC
Source	Synthetic

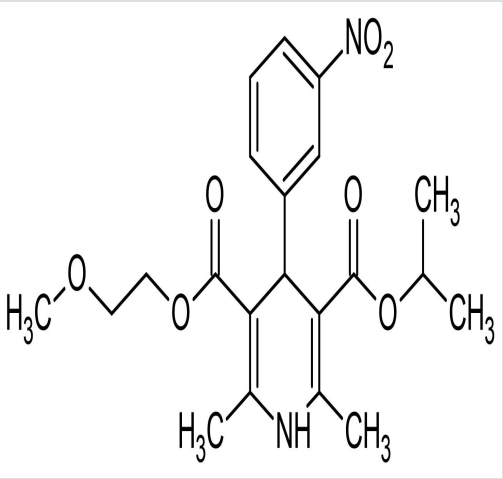
Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab120138 in the following tested applications.

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

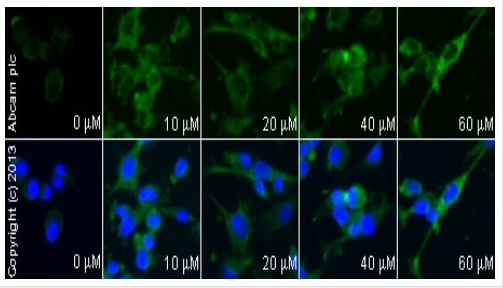
Application	Abreviews	Notes
Functional Studies		Use at an assay dependent concentration.

Images



Chemical Structure - Nimodipine, L-type Ca^{2+} channel blocker (ab120138)

2D chemical structure image of ab120138, Nimodipine, L-type Ca2+ channel blocker



Functional Studies - Nimodipine, L-type Ca^{2+} channel blocker (ab120138)

ab2770 staining aryl hydrocarbon receptor in MDA-MB-231 cells treated with nimodipine (ab120138), by ICC/IF. Increase in aryl hydrocarbon receptor expression correlates with increased concentration of nimodipine, as described in literature.
The cells were incubated at 37°C for 6h in media containing different concentrations of ab120138 (nimodipine) in DMSO, fixed with 100% methanol for 5 minutes at -20°C 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 **ab2770** (1/100 dilution) 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.

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

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