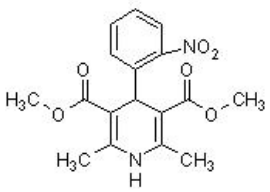
abcam

Product datasheet

Nifedipine, L-type Ca2+ channel blocker ab120135

12 References 2 Images

Overview

Product name	Nifedipine, L-type Ca2+ channel blocker
Description	L-type Ca^{2+} channel blocker
Biological description	L-type Ca^{2+} channel blocker. Potent, long-acting vasodilator. Also shown to inhibit vascular inflammation.
CAS Number	21829-25-4
Chemical structure	

Properties

Chemical name	1,4-Dihydro-2,6-dimethyl-4-(2-nitrophenyl)-3,5-pyridinedicarboxylic acid dimethyl ester
Molecular weight	346.34
Molecular formula	$C_{17}H_{18}N_2O_6$
PubChem identifier	4485
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	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	CC=1NC(C)=C(C(C=1C(=O)OC)c2ccccc2[N+]([O-])=O)C(=O)OC
Source	Synthetic

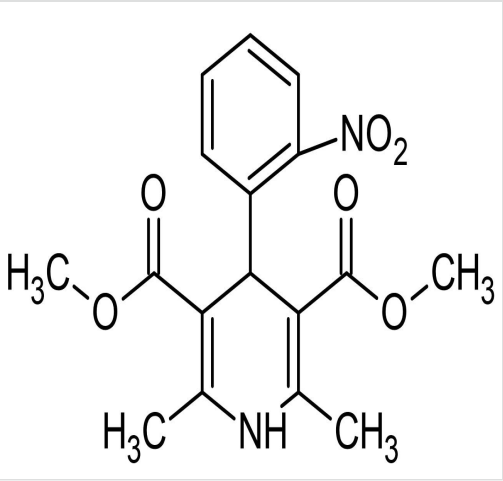
Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab120135 in the following tested applications.

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

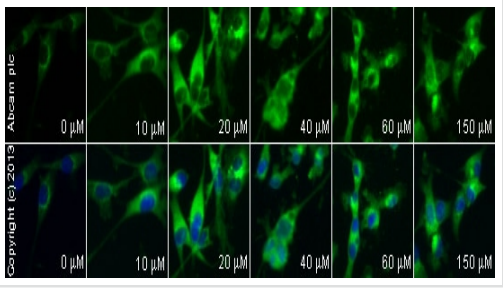
Application	Abreviews	Notes
Functional Studies		Use at an assay dependent concentration.

Images



Chemical Structure - Nifedipine, L-type Ca^{2+} channel blocker (ab120135)

2D chemical structure image of ab120135, Nifedipine, L-type Ca2+ channel blocker



Functional Studies - Nifedipine, L-type Ca^{2+} channel blocker (ab120135)

ab2770 staining aryl hydrocarbon receptor in MDA-MB-231 cells treated with nifedipine (ab120135), by ICC/IF. Increase in aryl hydrocarbon receptor expression correlates with increased concentration of nifedipine, as described in literature.
The cells were incubated at 37°C for 6h in media containing different concentrations of ab120135 (nifedipine) 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.

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