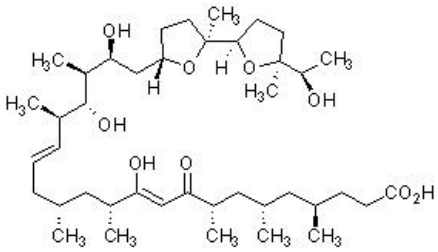
abcam

Product datasheet

Ionomycin (free acid), Ca2+ ionophore ab120370

9 References 2 Images

Overview

Product name	Ionomycin (free acid), Ca2+ ionophore
Description	Ca^{2+} ionophore
Biological description	Potent, highly selective Ca^{2+} ionophore. Effective mobile ion carrier for Ca^{2+}, highly specific for divalent cations (Ca > Mg >> Sr = Ba). Useful for studies of Ca^{2+} transport across biological membranes and increasing intracellular Ca^{2+} concentrations. Complexes with Ca^{2+} between pH 7 and 9.5. Absorption max. (280 nm, MeOH): 18600 $M^{-1}cm^{-1}$.
CAS Number	56092-81-0
Chemical structure	

Properties

Chemical name	(4*R*,6*S*,8*S*,10*Z*,12*R*,14*R*,16*E*,18*R*,19*R*,20*S*,21*S*)-11,19,21-Trihydroxy-4,6,8,12,14,18,20-heptamethyl-22-[(2*S*,2'*R*,5*S*,5'*S*)-octahydro-5'-[(1*R*)-1-hydroxyethyl]-2,5'-dimethyl[2,2'-bifuran]-5-yl]-9-oxo-10,16-docosadienoic acid
Molecular weight	709.01
Molecular formula	$C_{41}H_{72}O_9$
PubChem identifier	6912226
Storage instructions	Store at -20°C. Store under desiccating conditions. The product can be stored for up to 12 months.
Solubility overview	Soluble in ethanol to 10 mM and in DMSO to 10 mM
Handling	This product is supplied in one (or more) pack size which is freeze dried. Therefore the contents may not be readily visible, as they can coat the bottom or walls of the vial. Please see our **FAQs** and **information page** for more details on 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 O=C(O)CC[C@@H](C)C[C@H](C)C[C@H](C)C(=O)C=C(/O)[C@H](C)C[C@H](C)CC=C[C@@H](C)[C@@H](O)[C@@H](C)[C@@H](O)C[C@@H]1CC[C@](C)(O1)[C@H]2CC[C@](C)(O2)[C@@H](C)O

Source *Streptomyces conglobatus*

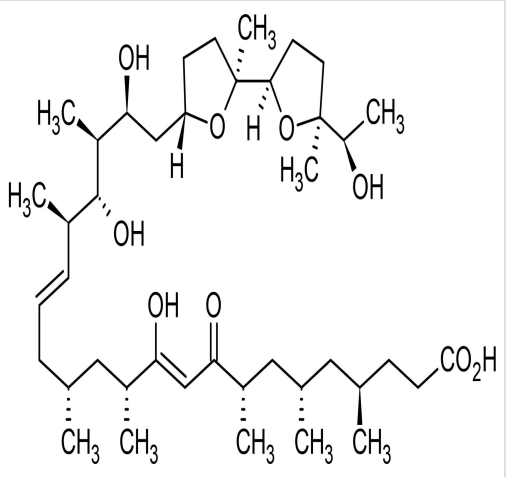
Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab120370 in the following tested applications.

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

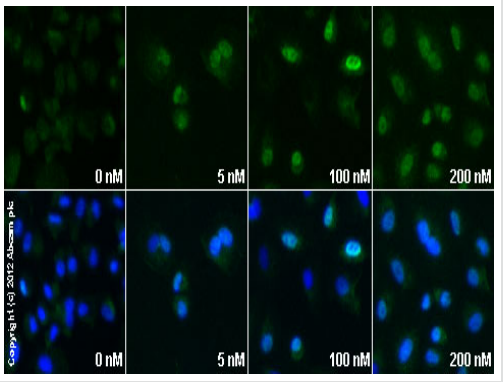
Application	Abreviews	Notes
Functional Studies		Use at an assay dependent concentration.

Images



Chemical Structure - Ionomycin (free acid), Ca^{2+} ionophore (ab120370)

2D chemical structure image of ab120370, Ionomycin (free acid), Ca2+ ionophore



Functional Studies - Ionomycin (free acid), Ca^{2+} ionophore (ab120370)

ab58668 staining ATF3 in A549 cells treated with ionomycin (free acid) (ab120370), by ICC/IF. Increase in ATF3 expression correlates with increased concentration of ionomycin (free acid), as described in literature.
The cells were incubated at 37°C for 2h in media containing different concentrations of ab120370 (Ionomycin (free acid)) 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 **ab58668** (10 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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