Hello Bio, Inc.
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500
F. 609-228-4994

customercare-usa@hellobio.com

DATASHEET

Ionomycin free acid

Product overview

Name	Ionomycin free acid
Cat No	HB1002
Purity	>98%
Description	Calcium ionophore. Stimulates cytokine production.

Images

Biological Data

Biological description

Potent calcium ionophore which shows selectivity for Ca^{2+} over Mg^{2+} and K^{+}. Acts as a Ca^{2+} carrier. Ionomycin calcium salt also available.

Directly stimulates store-regulated cation entry across biological membranes to enhance Ca^{2+} influx and increase intracellular Ca^{2+} concentration.

Synergies with with phorbol myristate acetate (PMA) to enhance activation of PKC. Frequently used in combination with PMA to stimulate T-cell activation and intracellular production of cytokines.

Also induces apoptosis.

Calcium ionophore A23187 also available.

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in ethanol (10 mM) and DMSO (10 mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	(4R,6S,8S,10Z,12R,14R,16E,18R,19R,20S,21S)-11,19,21-Trihydroxy-4,6,8,12,14,18,20-heptamethyl-22-[(2S,2'R,5S,5'S)-octahydro-5'-[(1R)-1-hydroxyethyl]-2,5'-dimethyl[2,2'-bifuran]-5-yl]-9-oxo-10,16-docosadienoic acid
Molecular Weight	709.01
Chemical structure	
Molecular Formula	$C_{41}H_{72}O_9$
CAS Number	56092-81-0
PubChem identifier	6912226
SMILES	C[C@H](CCC(=O)O)C[C@H](C)C[C@H](C)C(=O)/C=C(/[C@H](C)C[C@H](C)C/C=C/[C@@H](C)[C@H]([C@@H](C)[C@H](C[C@@H]1CC[C@@](O1)(C)[C@H]2CC[C@@](O2)(C)[C@@H](C)O)O)O)\O
InChiKey	PGHMRUGBZOYCAA-ADZNBVRBSA-N
MDL number	MFCD06798385
Appearance	White to off-white

References

Characterization of ionomycin as a calcium ionophore.

Liu C *et al* (1978) J Biol Chem 253(17)
PubMedID 28319

Cation transport and specificity of ionomycin. Comparison with ionophore A23187 in rat liver mitochondria.

Kauffman RF *et al* (1980) J Biol Chem 255(7)
PubMedID 6766939

PMA and ionomycin induce glioblastoma cell death: activation-induced cell-death-like phenomena occur in glioma cells.

Han S *et al* (2013) PLoS One 8(10)
PubMedID 24130787