

Product Name: ML SA1

Catalog No.: 4746

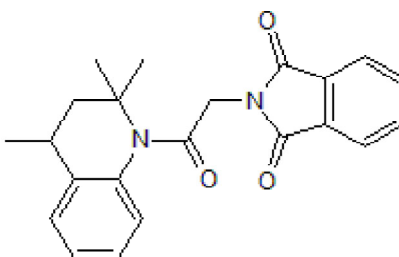
Batch No.: 2

CAS Number: 332382-54-4

IUPAC Name: 2-[2-(3,4-Dihydro-2,2,4-trimethyl-1(2*H*)-quinolinyl)-2-oxoethyl]-1*H*-isoindole-1,3(2*H*)-dione

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₂H₂₂N₂O₃
Batch Molecular Weight: 362.42
Physical Appearance: Off White solid
Solubility: DMSO to 20 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.3% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	72.91	6.12	7.73
Found	72.74	6.13	7.66

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

Product Name: ML SA1

Catalog No.: 4746

Batch No.: 2

CAS Number: 332382-54-4

IUPAC Name: 2-[2-(3,4-Dihydro-2,2,4-trimethyl-1(2*H*)-quinolinyl)-2-oxoethyl]-1*H*-isoindole-1,3(2*H*)-dione

Description:

ML SA1 is an activator of TRPML channels (TRPML1, 2 and 3); does not activate TRPM2, TRPV2, TRPV3, TRPC6 or TRPA1 channels. Induces TRPML-mediated Ca²⁺ release from lysosomes; activity corrects trafficking defects and reduces cholesterol accumulation in Niemann-Pick type C macrophages. Activation of TRPML1 by ML SA1 causes membrane accumulation of aquaporin-3 and -5, and significant depolymerization of the actin cytoskeleton, in human lymphatic endothelial cells (HLECs).

Physical and Chemical Properties:

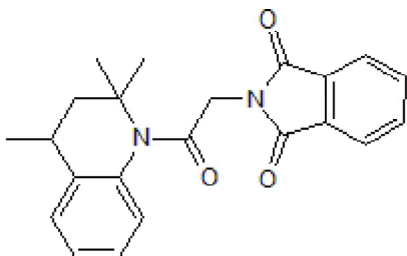
Batch Molecular Formula: C₂₂H₂₂N₂O₃

Batch Molecular Weight: 362.42

Physical Appearance: Off White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 20 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Yang (2024) TRPML1 acts as a predisposing factor in lymphedema development by regulating the subcellular localization of aquaporin-3, -5. *PLoS One* **19** e0310653. PMID: 39637010.

Shen et al (2012) Lipid storage disorders block lysosomal trafficking by inhibiting TRP channel and calcium release. *Nat. Commun.* **3** 731. PMID: 22415822.

Weiss et al (2012) Cross-talk between TRPML1 channel, lipids and lysosomal storage diseases. *Commun. Integr. Biol.* **5** 111. PMID: 22808310.

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel: +1 612 379 2956