

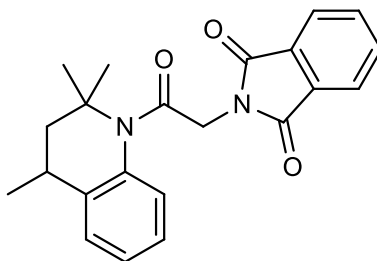
Catalog # 10-1439

ML-SA1

CAS# 332382-54-4

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

Lot # X105330



TRPML 1,2 and 3 channel activator.¹ Does not activate TRPM2, TRPV2, TRPV3, TRPC6 or TRPA1 channels.² ML-SA1 robustly activates whole cell TRPML1-4A and whole-endolysosome TRPML1 and is comparable (10 μ M) to the effect of the endogenous TRPML agonist, PI(3,5)P₂ (1 μ M).² Thus it is a useful chemical tool for studying the functions of TRPMLs. It induces TRPML-mediated Ca²⁺ release from lysosomes which corrects trafficking defects and reduces cholesterol accumulation in Niemann-Pick type C macrophages.^{2,3} Reduces intralysosomal Ca²⁺ level rescuing abnormal lysosomal storage in FIG4-deficient cells.⁴

- 1) Grimm *et al.* (2010), *Small molecule activators of TRPML3*; Mol. Chem. Biol., **17** 135
- 2) Shen *et al.* (2012), *Lipid storage disorders block lysosomal trafficking by inhibiting a TRP channel and lysosomal calcium release*; Nature Commun., **3** 731
- 3) Weiss *et al.* (2012), *Cross-talk between TRPML1 channel, lipids and lysosomal storage diseases*; Commun. Integr. Biol., **5** 111
- 4) Zou *et al.* (2015), *Reactivation of lysosomal Ca²⁺ Efflux Rescues Abnormal Lysosomal Storage in FIG4-Deficient Cells*; J. Neurosci., **35** 6801

PHYSICAL DATA

Molecular Weight:	362.43
Molecular Formula:	C ₂₂ H ₂₂ N ₂ O ₃
Purity:	98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (up to 20 mg/ml with warming) or Ethanol (up to 10 mg/ml)
Physical Description:	Tan solid
Storage and Stability:	Store as supplied at room temperature for up to 1 year from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.