MK6-83

Cat. No.: HY-110238

CAS No.: 1062271-24-2

Molecular Formula: $C_{16}H_{20}N_2O_2S_2$

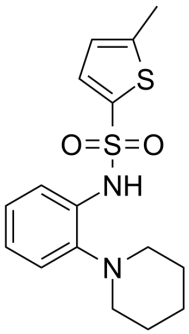
Molecular Weight: 336.47

Target: TRP Channel

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (74.30 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9720 mL	14.8602 mL	29.7203 mL
	5 mM	0.5944 mL	2.9720 mL	5.9441 mL
	10 mM	0.2972 mL	1.4860 mL	2.9720 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (7.43 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (7.43 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

MK6-83 is a new candidate agonist of TRPML1 with an improved efficacy and potency. MK6-83 has the potential for Mucolipidosis type IV study[1].

In Vitro

MK6-83 2 ranging from 0.2 to 30 μM shows no signs of cytotoxicity[1].
MK6-83 appears to be significantly more efficacious on fibroblast lysosomes isolated from R403C or V446L expressing cells than on those isolated from TRPML1$^{-/-}$ cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1].

Cell Line:	Lysosomes isolated from fibroblast cell lines derived from MLIV patients carrying either the F408D, the R403C or the V446L mutation[1].
Concentration:	0-10 μM.
Incubation Time:	24 h.
Result:	Efficacious on fibroblast lysosomes isolated from R403C or V446L expressing cells. Had no significant effect on lysosomes isolated from TRPML1$^{-/-}$ fibroblasts.

REFERENCES

[1]. Cheng-Chang Chen, et al. A Small Molecule Restores Function to TRPML1 Mutant Isoforms Responsible for Mucolipidosis Type IV. Nat Commun. 2014 Aug 14;5:4681.

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