# ML277

**Cat. No.:** HY-12343

**CAS No.:** 1401242-74-7

**Molecular Formula:** $C_{23}H_{25}N_3O_4S_2$

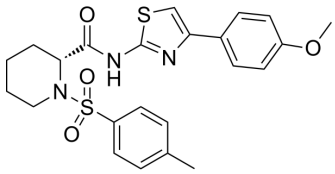
**Molecular Weight:** 471.59

**Target:** Potassium Channel

**Pathway:** Membrane Transporter/Ion Channel

**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 : ≥ 56 mg/mL (118.75 mM)

* "≥" means soluble, but saturation unknown.

| Preparing Stock Solutions | Mass / Solvent / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 2.1205 mL | 10.6024 mL | 21.2049 mL |
| | 5 mM | 0.4241 mL | 2.1205 mL | 4.2410 mL |
| | 10 mM | 0.2120 mL | 1.0602 mL | 2.1205 mL |

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

**In Vivo**

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.30 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

ML277 (CID-53347902) is a potent and selective activator of K(v)7.1 (KCNQ1) potassium channel activator ($EC_{50}$=270 nM), rescues function of pathophysiologically important mutant channel complexes in human induced pluripotent stem cell-derived cardiomyocytes[1][2].

**In Vitro**

ML277 (1 μM) increases the amplitude of KCNQ1 whole-cell and single-channel currents[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

[1]. Eldstrom J, et al. ML277 regulates KCNQ1 single-channel amplitudes and kinetics, modified by voltage sensor state. J Gen Physiol. 2021 Dec 6;153(12):e202112969.

[2]. Mattmann ME, et al. Identification of (R)-N-(4-(4-methoxyphenyl)thiazol-2-yl)-1-tosylpiperidine-2-carboxamide, ML277, as a novel, potent and selective K(v)7.1 (KCNQ1) potassium channel activator. Bioorg Med Chem Lett. 2012 Sep 15;22(18):5936-41.



Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA