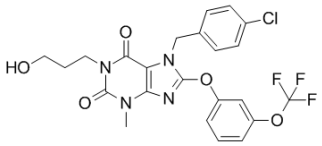
Pico145

Cat. No.:	HY-101507
CAS No.:	1628287-16-0
Molecular Formula:	$C_{23}H_{20}ClF_3N_4O_5$
Molecular Weight:	524.88
Target:	TRP Channel
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (190.52 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.9052 mL	9.5260 mL	19.0520 mL
5 mM	0.3810 mL	1.9052 mL	3.8104 mL
10 mM	0.1905 mL	0.9526 mL	1.9052 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 (4.76 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.76 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Pico145 (HC-608) is a remarkable inhibitor of TRPC1/4/5 channels, inhibits (−)-englerin A-activated TRPC4/TRPC5 channels, with IC_{50}s of 0.349 and 1.3 nM in cells, and shows no effect on TRPC3, TRPC6, TRPV1, TRPV4, TRPA1, TRPM2, TRPM8[1].

IC_{50} & Target

IC50: 0.349 nM (TRPC4, cell assay), 1.3 nM (TRPC5, cell assay), 0.03 nM (TRPC4-TRPC1, cell assay), 0.2 nM (TRPC5-TRPC1, cell assay)[1]

In Vitro

Pico145 (Compound 31, C31) is a remarkable small-molecule inhibitor of TRPC1/4/5 channels, inhibits (−)-englerin A-activated TRPC4/TRPC5 channels, with IC_{50}s of 0.349 and 1.3 nM in cells; Pico145 shows no effect on TRPC3, TRPC6, TRPV1, TRPV4, TRPA1, TRPM2, TRPM8. Pico145 also inhibits human TRPC4-TRPC1 and TRPC5-TRPC1 concatemers expressed in HEK

293 Tet^+ cells (IC_{50}, 0.03 nM and 0.2 nM, respectively). The potency of Pico145 can be reduced by increased (−)-englerin A concentration. Furthermore, Pico145 potently inhibits RPC4-TRPC1 channels activated by sphingosine 1-phosphate (S1P), and suppresses S1P-evoked Ca^{2+} entry through TRPC4-TRPC1 channels with an IC_{50} of 0.011 nM. Pico145 also sensitizes EA-sensitive cancer cell line (Hs578T cells) (IC_{50}, 0.11 nM). Pico145 (100 nM) lacks effect on store-operated Ca^{2+} entry and histamine-evoked Ca^{2+} entry into endothelial cells[1].

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

PROTOCOL

Cell Assay [1]

Cells are seeded at 90% confluence into 96-well clear-bottomed poly-d-lysine-coated black plates for HEK 293 cells and clear-bottomed Nunc plates for A498 cells, Hs578T cells, and HUVECs 24 h before experimentation. Fura-2 Ca^{2+} indicator dye is used to monitor changes in intracellular ionized Ca^{2+} concentration. To perform the experiment, the cells are incubated for 1 h with fura-2-AM (2 μM) in standard bath solution (SBS) at 37°C in the presence of 0.01% pluronic acid. SBS contains 135 mM NaCl, 5 mM KCl, 1.2 mM $MgCl_2$, 1.5 mM $CaCl_2$, 8 mM glucose, and 10 mM Hepes (pH titrated to 7.4 using NaOH). Subsequently, the cells are washed twice with SBS before adding Pico145 or ML204 for 30 min before making Ca^{2+} measurements. The fura-2 fluorescence is recorded using a 96-well fluorescence plate reader and the excitation wavelengths of 340 and 380 nm[1].

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

REFERENCES

[1]. Rubaiy HN, et al. Picomolar, selective, and subtype-specific small-molecule inhibition of TRPC1/4/5 channels. J Biol Chem. 2017 May 19;292(20):8158-8173.

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