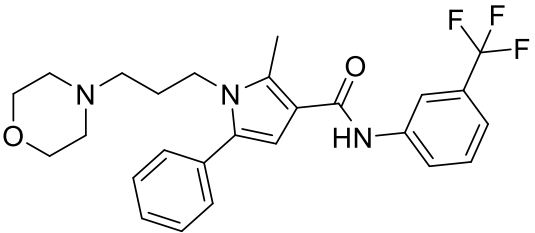


Product data sheet



MedKoo Cat#: 530432 Name: HC-067047 CAS: 883031-03-6 Chemical Formula: C ₂₆ H ₂₈ F ₃ N ₃ O ₂ Exact Mass: 471.2134 Molecular Weight: 471.5242	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

HC-067047 is a potent and selective TRPV4 antagonist. HC-067047 increases functional bladder capacity and reduces micturition frequency in WT mice and rats with cystitis. HC-067047 did not affect bladder function in Trpv4(-/-) mice, demonstrating that its in vivo effects are on target. HC-067047 may provide a promising means of treating bladder

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	20.0	42.42
DMF:PBS (pH 7.2) (1:2)	0.33	0.70
DMSO	51.54	109.30
Ethanol	5.93	12.58

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.12 mL	10.60 mL	21.21 mL
5 mM	0.42 mL	2.12 mL	4.24 mL
10 mM	0.21 mL	1.06 mL	2.12 mL
50 mM	0.04 mL	0.21 mL	0.42 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

- Zhang P, Xu J, Zhang H, Liu XY. Identification of TRPV4 as a novel target in invasiveness of colorectal cancer. BMC Cancer. 2021 Nov 23;21(1):1264. doi: 10.1186/s12885-021-08970-7. PMID: 34814869; PMCID: PMC8611894.
- Michinaga S, Onishi K, Shimizu K, Mizuguchi H, Hishinuma S. Pharmacological Inhibition of Transient Receptor Potential Vanilloid 4 Reduces Vasogenic Edema after Traumatic Brain Injury in Mice. Biol Pharm Bull. 2021;44(11):1759-1766. doi: 10.1248/bpb.b21-00512. PMID: 34719652.

In vivo study

- Toumpanakis D, Chatzianastasiou A, Vassilakopoulou V, Mizi E, Dettoraki M, Perlikos F, Giatra G, Mikos N, Theocharis S, Vassilakopoulos T. TRPV4 Inhibition Exerts Protective Effects Against Resistive Breathing Induced Lung Injury. Int J Chron Obstruct Pulmon Dis. 2022 Feb 15;17:343-353. doi: 10.2147/COPD.S336108. PMID: 35210764; PMCID: PMC8857953.
- Lee WJ, Shim WS. Cutaneous Neuroimmune Interactions of TSLP and TRPV4 Play Pivotal Roles in Dry Skin-Induced Pruritus. Front Immunol. 2021 Dec 2;12:772941. doi: 10.3389/fimmu.2021.772941. PMID: 34925342; PMCID: PMC8674573.

Product data sheet



7. Bioactivity

Biological target:

HC-067047 is a potent and selective TRPV4 antagonist and reversibly inhibits currents through the human, rat, and mouse TRPV4 orthologs with IC₅₀ values of 48 nM, 133 nM, and 17 nM, respectively.

In vitro activity

Inhibition of TRPV4 activity by HC067047 decreased cell migration of HCT-116 and SW620 cells (Fig. 1B). In line with these results, HCT-116 cells exhibited a reduced migration capability at 24 h and 48 h when treated with TRPV4 siRNAs (Fig. 1C and D). Furthermore, this study assessed HCT-116 and SW620 cell invasion using transwells that were coated with Matrigel. The results of the invasion assay indicated that HCT-116 and SW620 cells treated with TRPV4 siRNAs or HC-067047 had a decreased invasion ability when compared with control cells (Fig. 1E and F).

Reference: BMC Cancer. 2021 Nov 23;21(1):1264. <https://pubmed.ncbi.nlm.nih.gov/34814869/>

In vivo activity

Both preventive and therapeutic HC-067047 administration restored Cst (static compliance) and inhibited the increase in total protein, KC and IL-6 levels in BAL fluid in mice, compared to RB (resistive breathing). Preventive TRPV4 inhibition ameliorated the increase in BAL cellularity, while therapeutic TRPV4 inhibition exerted a partial effect.

Reference: Int J Chron Obstruct Pulmon Dis. 2022 Feb 15;17:343-353. <https://pubmed.ncbi.nlm.nih.gov/35210764/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.