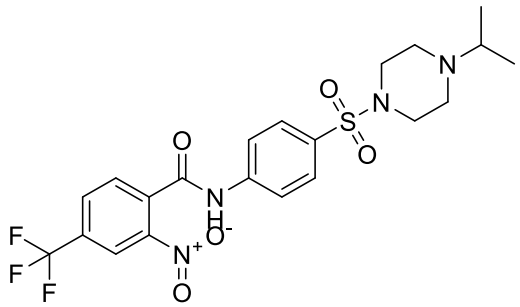
Product data sheet

MedKoo Cat#: 561416 Name: RN9893 CAS#: 1803003-68-0 Chemical Formula: $C_{21}H_{23}F_3N_4O_5S$ Exact Mass: 500.1341 Molecular Weight: 500.49	
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:
RN-9893 is an antagonist of TRPV4. It is a tri-substituted benzamide compound.

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
DMSO	25	49.95

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.00 mL	9.99 mL	19.98 mL
5 mM	0.40 mL	2.00 mL	4.00 mL
10 mM	0.20 mL	1.00 mL	2.00 mL
50 mM	0.04 mL	0.20 mL	0.40 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

1. Al-Shammari H, Latif N, Sarathchandra P, McCormack A, Rog-Zielinska EA, Raja S, Kohl P, Yacoub MH, Peyronnet R, Chester AH. Expression and function of mechanosensitive ion channels in human valve interstitial cells. PLoS One. 2020 Oct 15;15(10):e0240532. doi: 10.1371/journal.pone.0240532. PMID: 33057457; PMCID: PMC7561104.

In vivo study

1. Wei ZL, Nguyen MT, O'Mahony DJ, Acevedo A, Zipfel S, Zhang Q, Liu L, Dourado M, Chi C, Yip V, DeFalco J, Gustafson A, Emerling DE, Kelly MG, Kincaid J, Vincent F, Duncton MA. Identification of orally-bioavailable antagonists of the TRPV4 ion-channel. Bioorg Med Chem Lett. 2015 Sep 15;25(18):4011-5. doi: 10.1016/j.bmcl.2015.06.098. Epub 2015 Jul 6. PMID: 26235950.

7. Bioactivity
Biological target:

RN-9893 has IC50 values of 420 nM, 660 nM, and 320 nM for human, rat and mouse TRPV4 receptors, respectively. RN-9893 shows >15-fold selectivity for TRPV4 over TRPV1, TRPV3 and TRPM8 receptors with no inhibition of TRPV1 at a concentration of 10 μM, an IC50 >30 μM against TRPV3, an IC50 of approximately 30 μM against TRPM8, and also good selectivity using 54 binding assays against common biological targets.

In vitro activity

Product data sheet

Cyclic stretch-induced expression of COL I mRNA in cultured VICFB was blocked by RN-9893 while having no effect on the stretch-induced expression of COL III.

Reference: PLoS One. 2020 Oct 15;15(10):e0240532. https://pubmed.ncbi.nlm.nih.gov/33057457/

In vivo activity

RN-9893 26, inhibited human, rat and murine variants of TRPV4, and showed excellent selectivity over related TRP receptors, such as TRPV1, TRPV3 and TRPM8. The overall profile for RN-9893 indicates its possible use as a probe for in vivo applications.

Reference: Bioorg Med Chem Lett. 2015 Sep 15;25(18):4011-5. https://pubmed.ncbi.nlm.nih.gov/26235950/