

Product data sheet



MedKoo Cat#: 522647 Name: HC-030031 CAS: 349085-38-7 Chemical Formula: C ₁₈ H ₂₁ N ₅ O ₃ Exact Mass: 355.1644 Molecular Weight: 355.398	
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-030031 is a potent and selective TRPA1 antagonist, attenuates inflammatory- and neuropathy-induced mechanical hypersensitivity. HC-030031 antagonizes AITC- and formalin-evoked calcium influx with IC₅₀ of 6.2 μM and 5.3 μM respectively.

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	56.27
DMF:PBS (pH 7.2) (1:1)	0.5	1.41
DMSO	23.51	66.16

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.81 mL	14.07 mL	28.14 mL
5 mM	0.56 mL	2.81 mL	5.63 mL
10 mM	0.28 mL	1.41 mL	2.81 mL
50 mM	0.06 mL	0.28 mL	0.56 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. Eid SR, Crown ED, Moore EL, Liang HA, Choong KC, Dima S, Henze DA, Kane SA, Urban MO. HC-030031, a TRPA1 selective antagonist, attenuates inflammatory- and neuropathy-induced mechanical hypersensitivity. *Mol Pain*. 2008 Oct 27;4:48. doi: 10.1186/1744-8069-4-48. PMID: 18954467; PMCID: PMC2584039.

In vivo study

1. Eid SR, Crown ED, Moore EL, Liang HA, Choong KC, Dima S, Henze DA, Kane SA, Urban MO. HC-030031, a TRPA1 selective antagonist, attenuates inflammatory- and neuropathy-induced mechanical hypersensitivity. *Mol Pain*. 2008 Oct 27;4:48. doi: 10.1186/1744-8069-4-48. PMID: 18954467; PMCID: PMC2584039.

7. Bioactivity

Biological target:

HC-030031 is a potent and selective TRPA1 inhibitor, which antagonizes AITC- and formalin-evoked calcium influx with IC₅₀s of 6.2±0.2 and 5.3±0.2 μM, respectively.

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In vitro activity

Concentrations of HC-030031 from 0.3 to 60 μM were incubated with cells for 10 minutes prior to addition of an EC_{60} concentration of either cinnamaldehyde or AITC. HC-030031 dose-dependently blocked cinnamaldehyde- and AITC-induced calcium influx with IC_{50} values of 4.9 and 7.5 μM , respectively (data not shown).

Reference: Mol Pain. 2008 Oct 27;4:48. <https://pubmed.ncbi.nlm.nih.gov/18954467/>

In vivo activity

Next, a possible role for TRPA1 in spinal nerve ligation induced neuropathic pain was investigated using HC-030031. By 6 weeks post surgery, rats with L5/L6 ligation displayed significant mechanical hypersensitivity. This hypersensitivity was significantly reversed by HC-030031 (24 and 41% for 100 and 300 mg/kg, respectively) and pregabalin (56%; RMANOVA, $p < 0.003$, Figure 3, panel A).

Reference: Mol Pain. 2008 Oct 27;4:48. <https://pubmed.ncbi.nlm.nih.gov/18954467/>

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.