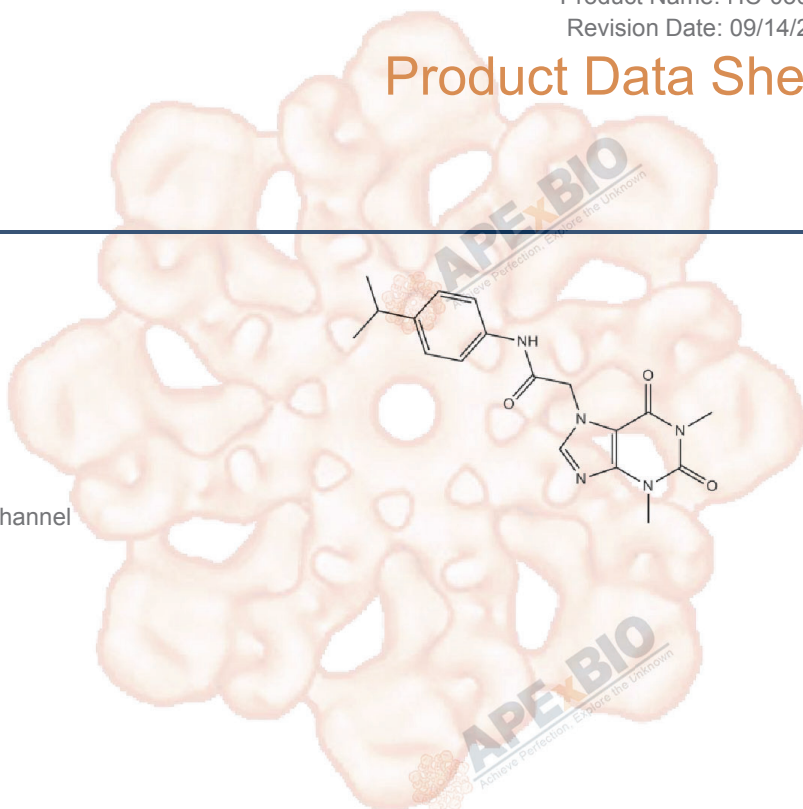


Product Data Sheet

HC-030031

Cat. No.:	B2100
CAS No.:	349085-38-7
Formula:	C ₁₈ H ₂₁ N ₅ O ₃
M.Wt:	355.39
Synonyms:	
Target:	Membrane Transporter/Ion Channel
Pathway:	TRP Channel
Storage:	Store at -20°C



Solvent & Solubility

insoluble in EtOH; insoluble in H₂O; ≥16.4 mg/mL in DMSO

In Vitro

Preparing Stock Solutions	Solvent	Mass		
		1mg	5mg	10mg
	Concentration			
	1 mM	2.8138 mL	14.0691 mL	28.1381 mL
	5 mM	0.5628 mL	2.8138 mL	5.6276 mL
	10 mM	0.2814 mL	1.4069 mL	2.8138 mL

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

Biological Activity

Shortsummary

TRPA1 channel blocker, potent and selective

IC₅₀ & Target

Cell Viability Assay

In Vitro

Cell Line:

Cells were plated in 384-well plates. Cells were loaded with 1 μM Fluo-4 and 0.05% pluronic acid for 1 h at room temperature. Formalin-selectivity experiments were run with 0.003% formalin. Agonist EC₅₀ curves used 0–25 μM AITC or 0–0.017% formalin. IC₅₀ curves for TRPA1 antagonists were constructed by using 0.625–40 μM antagonist in the presence of 5 μM AITC or 0.001% formalin using data collected 3 min after agonist addition. Data were

	collected by using a Hamamatsu FDSS 6000 fluorescence-based plate reader and analyzed using IGOR Pro.
Preparation method:	The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	10 µM for 3 min
Applications:	HC-030031 selectively inhibited TRPA1 activation by cinnamaldehyde and allyl isothiocyanate (AITC) in vitro [2]. HC-030031 inhibited the AITC- and formalin-induced Ca ²⁺ increase in TRPA1-expressing cells [1].
Animal experiment	
Animal models:	Male Sprague-Dawley rats model
Dosage form:	100 or 300 mg/kg; p.o. for 60 min;
Applications:	HC-030031 reduced inflammatory- and neuropathy-induced mechanical hypersensitivity. HC-030031 attenuated formalin- and allyl isothiocyanate-evoked pain behavior via inhibition of TRPA1 [2]. Moreover, HC-030031 alleviated behavioral mechanical hyperalgesia without affecting heat hyperalgesia in inflamed mice [3].
Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

In Vivo

Product Citations

See more customer validations on www.apexbt.com.

References

- 1McNamara, C. R., Mandel-Brehm, J., Bautista, D. M., Siemens, J., Deranian, K. L., Zhao, M., Hayward, N. J., Chong, J. A., Julius, D., Moran, M. M. and Fanger, C. M. (2007) TRPA1 mediates formalin-induced pain. *Proc Natl Acad Sci U S A*. 104, 13525-13530
- 2Eid, S. R., Crown, E. D., Moore, E. L., Liang, H. A., Choong, K. C., Dima, S., Henze, D. A., Kane, S. A. and Urban, M. O. (2008) HC-030031, a TRPA1 selective antagonist, attenuates inflammatory- and neuropathy-induced mechanical hypersensitivity. *Mol Pain*. 4, 48
- 3Lennertz, R. C., Kossyrev, E. A., Smith, A. K. and Stucky, C. L. (2012) TRPA1 mediates mechanical sensitization in nociceptors during inflammation. *PLoS One*. 7, e43597

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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