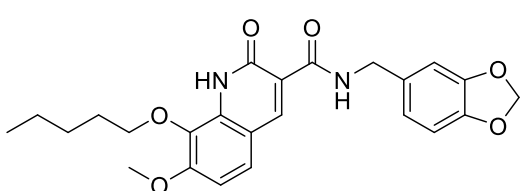


Product data sheet



MedKoo Cat#: 530625 Name: JTE-907 CAS: 282089-49-0 Chemical Formula: C ₂₄ H ₂₆ N ₂ O ₆ Exact Mass: 438.1791 Molecular Weight: 438.48	
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:

JTE-907 is a drug used in scientific research that acts as a selective CB2 inverse agonist. It has antiinflammatory effects in animal studies, thought to be mediated by an interaction between the CB2 receptor and IgE.

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	16.6	37.86
DMF:PBS (pH 7.2) (1:2)	0.2	0.46
DMSO	56.34	128.48
Ethanol	4.38	10.0
Methanol	1.0	2.28

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.28 mL	11.40 mL	22.81 mL
5 mM	0.46 mL	2.28 mL	4.56 mL
10 mM	0.23 mL	1.14 mL	2.28 mL
50 mM	0.05 mL	0.23 mL	0.46 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. Ruz-Maldonado I, Atanes P, Huang GC, Liu B, Persaud SJ. Direct Stimulatory Effects of the CB2 Ligand JTE 907 in Human and Mouse Islets. *Cells*. 2021 Mar 22;10(3):700. doi: 10.3390/cells10030700. PMID: 33809893; PMCID: PMC8004177.
2. Maekawa T, Nojima H, Kuraishi Y, Aisaka K. The cannabinoid CB2 receptor inverse agonist JTE-907 suppresses spontaneous itch-associated responses of NC mice, a model of atopic dermatitis. *Eur J Pharmacol*. 2006 Aug 7;542(1-3):179-83. doi: 10.1016/j.ejphar.2006.05.040. Epub 2006 Jun 2. PMID: 16824511.

In vivo study

1. Dotsey E, Ushach I, Pone E, Nakajima R, Jasinskas A, Argueta DA, Dillon A, DiPatrizio N, Davies H, Zlotnik A, Crompton PD, Felgner PL. Transient Cannabinoid Receptor 2 Blockade during Immunization Heightens Intensity and Breadth of Antigen-specific Antibody Responses in Young and Aged mice. *Sci Rep*. 2017 Feb 17;7:42584. doi: 10.1038/srep42584. PMID: 28209996; PMCID: PMC5314369.

Product data sheet



2. Ueda Y, Miyagawa N, Matsui T, Kaya T, Iwamura H. Involvement of cannabinoid CB(2) receptor-mediated response and efficacy of cannabinoid CB(2) receptor inverse agonist, JTE-907, in cutaneous inflammation in mice. *Eur J Pharmacol.* 2005 Sep 27;520(1-3):164-71. doi: 10.1016/j.ejphar.2005.08.013. PMID: 16153638.

7. Bioactivity

Biological target:

JTE-907 is a highly selective, orally active CB2 receptor inverse agonist and exerts anti-inflammatory effects in vivo.

In vitro activity

JTE-907 (10, but not 1, mg/kg) and tacrolimus, but not betamethasone, tended to alleviate the dermatitis. Betamethasone inhibited the body weight gain. These results suggest that JTE-907 suppresses spontaneous itch-associated responses of NC mice without adverse effects such as weight loss.

Reference: *Eur J Pharmacol.* 2006 Aug 7;542(1-3):179-83. <https://pubmed.ncbi.nlm.nih.gov/16824511/>

In vivo activity

Transient administration of the cannabinoid receptor 2 antagonist AM630 (10 mg/kg) or inverse agonist JTE907 (3 mg/kg) during immunization heightens the intensity and breadth of antigen-specific immune responses in young and aged mice through the upregulation of immunomodulatory genes in secondary lymphoid tissues.

Reference: *Sci Rep.* 2017 Feb 17;7:42584. <https://pubmed.ncbi.nlm.nih.gov/28209996/>

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.