

Product data sheet



MedKoo Cat#: 531401 Name: ACT-462206 CAS#: 1361321-96-1 Chemical Formula: C ₂₀ H ₂₄ N ₂ O ₄ S Exact Mass: 388.1457 Molecular Weight: 388.482	
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:

ACT-462206 is an orally active, potent, brain-penetrant dual orexin 1/orexin 2 receptor antagonist.

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	38.85	100.0
Ethanol	38.85	100.0

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.57 mL	12.87 mL	25.74 mL
5 mM	0.51 mL	2.57 mL	5.15 mL
10 mM	0.26 mL	1.29 mL	2.57 mL
50 mM	0.05 mL	0.26 mL	0.51 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

TBD

In vivo study

1. So M, Hashimoto H, Saito R, Yamamoto Y, Motojima Y, Ueno H, Sonoda S, Yoshimura M, Maruyama T, Kusuhara K, Ueta Y. Inhibition of ghrelin-induced feeding in rats by pretreatment with a novel dual orexin receptor antagonist. *J Physiol Sci.* 2018 Mar;68(2):129-136. doi: 10.1007/s12576-016-0517-5. Epub 2017 Jan 4. Erratum in: *J Physiol Sci.* 2019 Feb 14; PMID: 28054308; PMCID: PMC6394659.

2. Boss C, Roch-Brisbare C, Steiner MA, Treiber A, Dietrich H, Jenck F, von Raumer M, Sifferlen T, Brotschi C, Heidmann B, Williams JT, Aissaoui H, Siegrist R, Gatfield J. Structure-activity relationship, biological, and pharmacological characterization of the proline sulfonamide ACT-462206: a potent, brain-penetrant dual orexin 1/orexin 2 receptor antagonist. *ChemMedChem.* 2014 Nov;9(11):2486-96. doi: 10.1002/cmdc.201402258. Epub 2014 Aug 21. PMID: 25147058.

7. Bioactivity

Biological target:

Potent, dual orexin receptor antagonist.

In vitro activity

Product data sheet



TBD

In vivo activity

In the present study, it was demonstrated that icv administration of DORA, ACT462206, a novel orexin receptor antagonist, significantly suppressed centrally administered ghrelin-induced feeding in rats. In addition, Fos immunohistochemistry revealed that centrally administered ghrelin induced Fos expression in the PVN, the Arc, and the LHA, which are areas related to feeding behavior. Fos expression was significantly inhibited by pretreatment with DORA; however, it remained significantly increased in those nuclei when compared to that after icv administration of ghrelin without DORA. It is worth noting that Fos expression of orexin-A-IR neurons induced by icv administration of ghrelin was significantly inhibited by pretreatment with DORA, but the Fos expression in orexin-A-IR neurons remained significantly increased.

Reference: J Physiol Sci. 2018; 68(2): 129–136. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6394659/>

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.