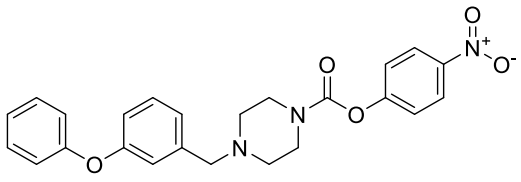
Product data sheet

MedKoo Cat#: 522417 Name: JZL195 CAS: 1210004-12-8 Chemical Formula: $C_{24}H_{23}N_3O_5$ Exact Mass: 433.1638 Molecular Weight: 433.464	
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:
JZL195 is a potent and selective dual inhibitor of FAAH and monacylglycerol lipase (MAGL). JZL195 has greater anti-allodynic efficacy than selective FAAH, or MAGL inhibitors, plus a greater therapeutic window than a cannabinoid receptor agonist. JZL195 may have greater potential in alleviating neuropathic pain, compared to selective FAAH and MAGL inhibitors, or cannabinoid receptor agonists.

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	5.0	0.46
DMSO	28.98	66.86

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.31 mL	11.54 mL	23.07 mL
5 mM	0.46 mL	2.31 mL	4.61 mL
10 mM	0.23 mL	1.15 mL	2.31 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

TBD

In vivo study

1. Anderson WB, Gould MJ, Torres RD, Mitchell VA, Vaughan CW. Actions of the dual FAAH/MAGL inhibitor JZL195 in a murine inflammatory pain model. Neuropharmacology. 2014 Jun;81:224-30. doi: 10.1016/j.neuropharm.2013.12.018. Epub 2013 Dec 30. PMID: 24384256.
2. Wise LE, Long KA, Abdullah RA, Long JZ, Cravatt BF, Lichtman AH. Dual fatty acid amide hydrolase and monoacylglycerol lipase blockade produces THC-like Morris water maze deficits in mice. ACS Chem Neurosci. 2012 May 16;3(5):369-78. doi: 10.1021/cn200130s. Epub 2012 Jan 27. PMID: 22860205; PMCID: PMC3382457.

7. Bioactivity
Biological target:

JZL195 is a selective and efficacious dual fatty acid amide hydrolase (FAAH) and monoacylglycerol lipase (MAGL) inhibitor with IC_{50}s of 2 and 4 nM, respectively.

Product data sheet

In vitro activity

TBD

In vivo activity

The effect of systemic injections of a range of doses of JZL195 and the pan-cannabinoid receptor agonist WIN55212 were performed 1 day following intraplantar injection of CFA in C57BL/6 mice. JZL195 and WIN55212 both reduced mechanical allodynia and thermal hyperalgesia, and produced catalepsy and sedation in a dose dependent manner. These findings suggest that JZL195 reduces inflammation induced allodynia at doses below those which produce side-effects, and displays greater efficacy that FAAH or MAGL inhibitors. Thus, dual FAAH/MAGL inhibition has the potential to alleviate inflammatory pain with reduced cannabinoid-like side-effects.

Reference: Neuropharmacology. 2014 Jun;81:224-30. https://pubmed.ncbi.nlm.nih.gov/24384256/

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.