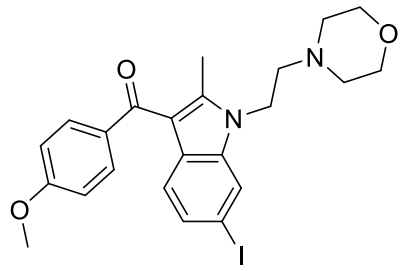
Product data sheet

MedKoo Cat#: 319600 Name: Iodopravadoline CAS: 164178-33-0 Chemical Formula: $C_{23}H_{25}IN_2O_3$ Exact Mass: 504.091 Molecular Weight: 504.3685	
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:
Iodopravadoline, also known as AM630, is an inverse agonist at the human cannabinoid CB1 receptor. Iodopravadoline has been found to attenuate the ability of a number of cannabinoids to inhibit electrically-evoked twitches of the mouse isolated vas deferens. AM630 was markedly more potent as an antagonist of delta 9-THC and CP 55,940 (Kd = 14.0 and 17.3 nM respectively) than as an antagonist of WIN 55,212-2, AM356 or anandamide (Kd = 36.5, 85.9 and 278.8 nM 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
DMSO	50.44	100.0

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.98 mL	9.91 mL	19.83 mL
5 mM	0.40 mL	1.98 mL	3.97 mL
10 mM	0.20 mL	0.99 mL	1.98 mL
50 mM	0.04 mL	0.20 mL	0.40 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. Williams G, Chambers D, Rahman R, Molina-Holgado F. Transcription Profile and Pathway Analysis of the Endocannabinoid Receptor Inverse Agonist AM630 in the Core and Infiltrative Boundary of Human Glioblastoma Cells. Molecules. 2022 Mar 22;27(7):2049. doi: 10.3390/molecules27072049. PMID: 35408449; PMCID: PMC9000751.
2. Li W, Sun Y. Nrf2 is required for suppressing osteoclast RANKL-induced differentiation in RAW 264.7 cells via inactivating cannabinoid receptor type 2 with AM630. Regen Ther. 2020 Mar 2;14:191-195. doi: 10.1016/j.reth.2020.02.001. PMID: 32154333; PMCID: PMC7056625.

In vivo study

1. Patil M, Patwardhan A, Salas MM, Hargreaves KM, Akopian AN. Cannabinoid receptor antagonists AM251 and AM630 activate TRPA1 in sensory neurons. Neuropharmacology. 2011 Sep;61(4):778-88. doi: 10.1016/j.neuropharm.2011.05.024. Epub 2011 May 27. PMID: 21645531; PMCID: PMC3130079.

7. Bioactivity
Biological target:
Iodopravadoline, also known as AM630, is an inverse agonist at the human cannabinoid CB1 receptor.

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In vitro activity

The next objective was to probe for differences in the the GBM-derived cell lines by looking at the expression changes driven by the CB2 receptor inverse agonist AM630. This study found that AM630 drove a substantial transcriptional response in the core cell population.

Reference: Molecules. 2022 Mar 22;27(7):2049. https://pubmed.ncbi.nlm.nih.gov/35408449/

In vivo activity

WIN-induced inhibition of CAP responses in sensory neurons was reversed by AM630 pre-treatment and AM251 co-treatment (25 μM each), as these conditions inhibit WIN responses. Hindpaw injections of AM630 and AM251 did not produce nocifensive behaviors. However, both compounds modulated CAP-induced thermal hyperalgesia in wild-type mice and rats, but not TRPA1 null-mutant mice.

Reference: Neuropharmacology. 2011 Sep;61(4):778-88. https://pubmed.ncbi.nlm.nih.gov/21645531/