

# Product data sheet



MedKoo Cat#: 525320 Name: AM4113 CAS#: 614726-85-1 Chemical Formula: C <sub>17</sub> H <sub>12</sub> Cl <sub>3</sub> N <sub>3</sub> O Exact Mass: 379.0046 Molecular Weight: 380.653	
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:

AM4113 is a cannabinoid receptor 1 (CB1)-selective 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	24.37	64.02
DMF	10.0	26.27
DMF:PBS (pH 7.2) (1:3)	0.25	0.66
Ethanol	4.06	10.67

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.63 mL	13.14 mL	26.27 mL
5 mM	0.53 mL	2.63 mL	5.25 mL
10 mM	0.26 mL	1.31 mL	2.63 mL
50 mM	0.05 mL	0.26 mL	0.53 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. He XH, Jordan CJ, Vemuri K, Bi GH, Zhan J, Gardner EL, Makriyannis A, Wang YL, Xi ZX. Cannabinoid CB1 receptor neutral antagonist AM4113 inhibits heroin self-administration without depressive side effects in rats. *Acta Pharmacol Sin.* 2019 Mar;40(3):365-373. doi: 10.1038/s41401-018-0059-x. Epub 2018 Jul 2. PMID: 29967454; PMCID: PMC6460369.

2. Cluny NL, Chambers AP, Vemuri VK, Wood JT, Eller LK, Freni C, Reimer RA, Makriyannis A, Sharkey KA. The neutral cannabinoid CB<sub>1</sub> receptor antagonist AM4113 regulates body weight through changes in energy intake in the rat. *Pharmacol Biochem Behav.* 2011 Jan;97(3):537-43. doi: 10.1016/j.pbb.2010.10.013. Epub 2010 Nov 4. PMID: 21056053; PMCID: PMC3023913.

## 7. Bioactivity

Biological target:

CB1 antagonist 2 inhibits CB1 in vivo with an IC<sub>50</sub> of 25.5 nM.

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In vitro activity

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TBD

In vivo activity

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AM4113 (10 mg kg<sup>-1</sup>) significantly reduced food intake in wild type mice,  $F=13.6$ ,  $p=0.006$  (Figure 1A), at 2, 3 and 18 h,  $p<0.05$ . In comparison, there were no significant differences in food intake between vehicle and AM4113 treated CB<sub>1</sub> receptor knockout mice,  $F=0.6$ ,  $p>0.05$  (Figure 1B).

Reference: Pharmacol Biochem Behav. 2011 Jan 1; 97(3): 537–543. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3023913/>

*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.*