

Product data sheet



MedKoo Cat#: 529301 Name: GW 842166X CAS: 666260-75-9 Chemical Formula: C ₁₈ H ₁₇ Cl ₂ F ₃ N ₄ O ₂ Exact Mass: 448.0681 Molecular Weight: 449.2552		
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:

GW 842166X is a cannabinoid receptor 2 (CB2) agonist potentially for the treatment of inflammatory pain.

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	20.0	44.52
DMF:PBS (pH 7.2) (1:3)	0.25	0.56
DMSO	37.77	84.07
Ethanol	0.3	0.67

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.23 mL	11.13 mL	22.26 mL
5 mM	0.45 mL	2.23 mL	4.45 mL
10 mM	0.22 mL	1.11 mL	2.23 mL
50 mM	0.04 mL	0.22 mL	0.45 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. Liu X, Yu H, Chen B, Friedman V, Mu L, Kelly TJ, Ruiz-Pérez G, Zhao L, Bai X, Hillard CJ, Liu QS. CB2 Agonist GW842166x Protected against 6-OHDA-Induced Anxiogenic- and Depressive-Related Behaviors in Mice. *Biomedicines*. 2022 Jul 22;10(8):1776. doi: 10.3390/biomedicines10081776. PMID: 35892676; PMCID: PMC9329798.

2. Yu H, Liu X, Chen B, Vickstrom CR, Friedman V, Kelly TJ, Bai X, Zhao L, Hillard CJ, Liu QS. The Neuroprotective Effects of the CB2 Agonist GW842166x in the 6-OHDA Mouse Model of Parkinson's Disease. *Cells*. 2021 Dec 16;10(12):3548. doi: 10.3390/cells10123548. PMID: 34944056; PMCID: PMC8700250.

7. Bioactivity

Biological target:

GW842166X is a potent and selective cannabinoid receptor 2 (CB2) agonist with IC₅₀ values of 63 and 91 nM for human and rat CB2, respectively.

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In vitro activity

TBD

In vivo activity

The selective CB2 agonist GW842166x exerted neuroprotective effects against 6-hydroxydopamine (6-OHDA)-induced loss of dopaminergic terminals and dopamine release in the striatum, which were blocked by the CB2 antagonist AM630. 6-OHDA-treated mice exhibited anxiogenic- and depressive-like behaviors in the open-field, sucrose preference, novelty-suppressed feeding, marble burying, and forced swim tests but did not show significant changes in the elevated plus-maze and light-dark box test. GW842166x treatments ameliorated 6-OHDA-induced anxiogenic- and depressive-like behaviors, but the effects were blocked by CB2 antagonism, suggesting a CB2-dependent mechanism.

Reference: Biomedicines. 2022 Jul 22;10(8):1776. <https://pubmed.ncbi.nlm.nih.gov/35892676/>

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.