

Product Datasheet

AM281

Catalog No. **BP-02496** · CAS **202463-68-1** · Form **free base** · Physical state **solid** · Color **White to light yellow** · Version **1.0** · Revision **2026-09-10**

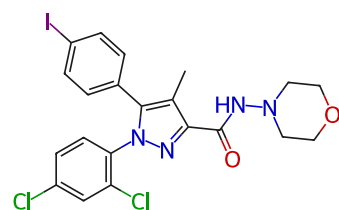
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Target Cannabinoid Receptor	Research area Neurological Disease
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Molecular formula **C₂₁H₁₉Cl₂IN₄O₂**

Molecular weight **557.2120**

STRUCTURE



DESCRIPTION

AM281 is a selective CB1 receptor antagonist with an IC₅₀ of 9.91 nM. AM281 inhibits CB2 receptor with an IC₅₀ of 13000 nM .

BIOLOGICAL ACTIVITY

In Vitro

AM281 (0.01-10 μM) promotes a concentration dependent increase in 10 μM Aβ 25-35 induced neurotoxicity in SH-SY5Y cells in the presence of 10 μM KSO 1-6.

In Vivo

Acute administration (2.5, 5 and 10 mg/kg) of AM281 shortens exploration time and improves memory performance, as does chronic administration (0.62, 1.25 and 2.5 mg/kg) of AM281.

Chronic administration of AM281 at 2.5 mg/kg improves recognition index to the 22.1±4.8 and single dose of AM281 at 5 mg/kg improves the memory impairment to the 8.5±4, as compared with vehicle-treated which is 4.8±2.5. Administration of AM281 at a dose of 2.5 mg/kg in chronic form and 5 mg/kg in acute dose improve memory.

SOLUBILITY

Soluble in DMSO, not in water

REFERENCES

[1].K S S Dossou, et al. Development and preliminary validation of a plate-based CB1/CB2 receptor functional assay. Anal Biochem. 2013 Jun 15;437(2):138-43.

[2].Milton, NG, et al. Effects of the CB1 cannabinoid receptor antagonist AM281 on kissorpin protection against amyloid-β neurotoxicity.

[3].G Vaseghi, et al. The effect of AM281, a cannabinoid antagonist, on memory performance during spontaneous morphine withdrawal in mice. Res Pharm Sci. 2013 Jan;8(1):59-64.

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