

# Product data sheet



MedKoo Cat#: 531989 Name: JNJ-5207787 CAS: 683746-68-1 Chemical Formula: C <sub>32</sub> H <sub>38</sub> N <sub>4</sub> O <sub>2</sub> Exact Mass: 510.2995 Molecular Weight: 510.682	
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:

JNJ-5207787 is a small molecule antagonist of the neuropeptide Y Y2 receptor.

## 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	5.11	10.01
Ethanol	5.11	10.01

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.96 mL	9.79 mL	19.58 mL
5 mM	0.39 mL	1.96 mL	3.92 mL
10 mM	0.20 mL	0.98 mL	1.96 mL
50 mM	0.04 mL	0.20 mL	0.39 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. Bonaventure P, Nepomuceno D, Mazur C, Lord B, Rudolph DA, Jablonowski JA, Carruthers NI, Lovenberg TW. Characterization of N-(1-Acetyl-2,3-dihydro-1H-indol-6-yl)-3-(3-cyano-phenyl)-N-[1-(2-cyclopentyl-ethyl)-piperidin-4yl]acrylamide (JNJ-5207787), a small molecule antagonist of the neuropeptide Y Y2 receptor. *J Pharmacol Exp Ther*. 2004 Mar;308(3):1130-7. doi: 10.1124/jpet.103.060459. Epub 2003 Nov 14. PMID: 14617685.
2. Jablonowski JA, Chai W, Li X, Rudolph DA, Murray WV, Youngman MA, Dax SL, Nepomuceno D, Bonaventure P, Lovenberg TW, Carruthers NI. Novel non-peptidic neuropeptide Y Y2 receptor antagonists. *Bioorg Med Chem Lett*. 2004 Mar 8;14(5):1239-42. doi: 10.1016/j.bmcl.2003.12.057. PMID: 14980673.

### In vivo study

1. Drexel M, Sperk G. Seizure-induced overexpression of NPY induces epileptic tolerance in a mouse model of spontaneous recurrent seizures. *Front Mol Neurosci*. 2022 Oct 13;15:974784. doi: 10.3389/fnmol.2022.974784. PMID: 36311021; PMCID: PMC9608171.
2. Bonaventure P, Nepomuceno D, Mazur C, Lord B, Rudolph DA, Jablonowski JA, Carruthers NI, Lovenberg TW. Characterization of N-(1-Acetyl-2,3-dihydro-1H-indol-6-yl)-3-(3-cyano-phenyl)-N-[1-(2-cyclopentyl-ethyl)-piperidin-4yl]acrylamide (JNJ-5207787), a small molecule antagonist of the neuropeptide Y Y2 receptor. *J Pharmacol Exp Ther*. 2004 Mar;308(3):1130-7. doi: 10.1124/jpet.103.060459. Epub 2003 Nov 14. PMID: 14617685.

## 7. Bioactivity

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## Biological target:

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JNJ-5207787 is a small molecule antagonist of the neuropeptide Y Y2 receptor.

## In vitro activity

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JNJ-5207787 inhibited the binding of peptide YY (PYY) to human Y(2) receptor in KAN-Ts cells ( $pIC(50) = 7.00 \pm 0.10$ ) and to rat Y(2) receptors in rat hippocampus ( $pIC(50) = 7.10 \pm 0.20$ ).

Reference: J Pharmacol Exp Ther. 2004 Mar;308(3):1130-7. <https://pubmed.ncbi.nlm.nih.gov/14617685/>

## In vivo activity

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When this study injected JNJ 5207787 together with PTZ (either dose) the number of seizures, however, became significantly increased. Injection of the Y2 receptor antagonist JNJ 5207787 prevents this protective action of NPY only when release of the peptide is triggered by injection of PTZ and induces pronounced convulsions.

Reference: Front Mol Neurosci. 2022 Oct 13;15:974784. <https://pubmed.ncbi.nlm.nih.gov/36311021/>

*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.*