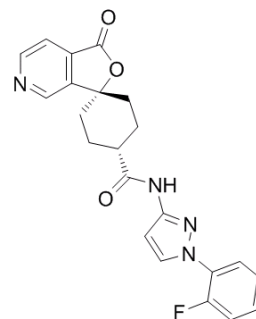


## Data Sheet

<b>Product Name:</b>	MK-0557
<b>Cat. No.:</b>	HY-15411
<b>CAS No.:</b>	328232-95-7
<b>Molecular Formula:</b>	C <sub>22</sub> H <sub>19</sub> FN <sub>4</sub> O <sub>3</sub>
<b>Molecular Weight:</b>	406.41
<b>Target:</b>	Neuropeptide Y Receptor
<b>Pathway:</b>	GPCR/G Protein
<b>Solubility:</b>	DMSO: ≥ 28 mg/mL



### BIOLOGICAL ACTIVITY:

MK-0557 is a highly selective, orally available neuropeptide **Y5** receptor antagonist with a **K<sub>i</sub>** of 1.6 nM.

IC<sub>50</sub> & Target: **K<sub>i</sub>**: 1.6 nM (Y5)<sup>[1]</sup>

**In Vitro:** Neuropeptide Y (NPY) is a potent orexigenic neuropeptide, and antagonism of NPY Y1 and NPY Y5 receptors (NPYxR) is considered a potentially important anti-obesity drug target. MK-0557 has a **K<sub>i</sub>**=1.3 nM at the human NPY5R, with similar affinities at rhesus, mouse, and rat NPY5R. MK-0557 has no significant binding to the human NPY1R, NPY2R, NPY4R, or mouse NPY6R at concentrations of 10 μM<sup>[2]</sup>.

**In Vivo:** MK-0557 antagonizes the effects of the NPY5R-selective agonist on body-weight gain and hyperphagia in C57BL/6J mice and significantly suppresses the body-weight gain in diet-induced obese (DIO) mice. When lean mice on regular chow are switched to a medium high-fat diet (4.2 kcal/g) and treated with MK-0557 at 30 mg/kg PO QD, MK-0557 causes a 40% reduction in body-weight gain at day 35<sup>[2]</sup>.

### References:

[1]. Fichtner M, et al. Discovery and evaluation of spirocyclic derivatives as antagonists of the neuropeptide Y5 receptor. *Bioorg Med Chem Lett*. 2012 Apr 15; 22(8):2738-43.

[2]. Erondü N, et al. Neuropeptide Y5 receptor antagonism does not induce clinically meaningful weight loss in overweight and obese adults. *Cell Metab*. 2006 Oct;4(4):275-82.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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