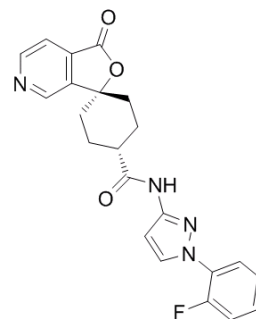


Data Sheet

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



BIOLOGICAL ACTIVITY:

MK-0557 is a highly selective, orally available neuropeptide **Y5** receptor antagonist with a **K_i** of 1.6 nM.

IC₅₀ & Target: **K_i**: 1.6 nM (Y5)^[1]

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_i**=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^[2].

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^[2].

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.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA