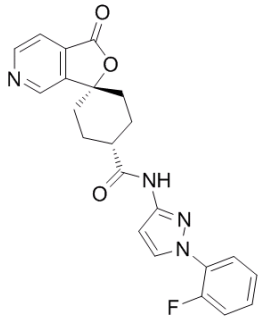
Data Sheet

Product Name:	MK–0557
Cat. No.:	HY-15411
CAS No.:	328232-95-7
Molecular Formula:	$C_{22}H_{19}FN_4O_3$
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: Ki: 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]. Erondu 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.

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