Certificate of Analysis

Product Name: **MK 0677** **Catalog No.: 5272** **Batch No.: 3**

CAS Number: 159752-10-0

IUPAC Name: 2-Amino-*N*-[(1*R*)-2-[1,2-dihydro-1-(methylsulfonyl)spiro[3*H*-indole-3,4'-piperidin]-1'-yl]-2-oxo-1-[(phenylmethoxy) methyl]ethyl]-2-methylpropanamide methanesulfonate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{27}H_{36}N_4O_5S.CH_3SO_3H.1¼H_2O$

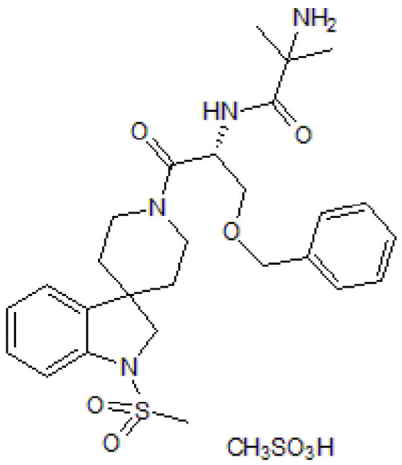
Batch Molecular Weight: 647.29

Physical Appearance: White solid

Solubility: water to 50 mM
DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.1% purity

Chiral HPLC: Shows 100% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	51.96	6.62	8.66
Found	51.64	6.53	8.58

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Description:

MK 0677 is a high affinity ghrelin receptor agonist (pK_i = 8.14). Growth hormone (GH) secretagog; stimulates GH release from rat pituitary cells in vitro (EC_{50} = 1.3 nM) and enhances GH plasma levels in vivo. Also attenuates isoproterenol-induced lipolysis in rat adipocytes in vitro. Orally bioavailable.

Physical and Chemical Properties:

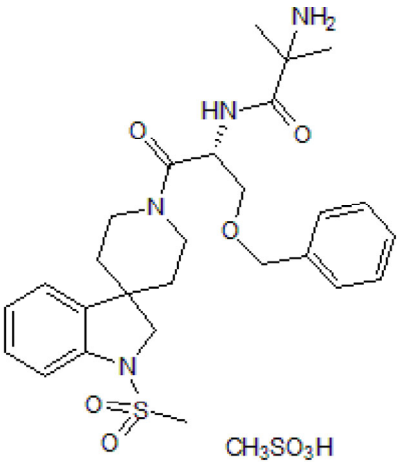
Batch Molecular Formula: $C_{27}H_{36}N_4O_5S.CH_3SO_3H.1¼H_2O$

Batch Molecular Weight: 647.29

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

water to 50 mM
DMSO to 100 mM

This compound is hygroscopic and may absorb atmospheric moisture during prolonged storage, causing the solid to become sticky and/or collapse into a gel or glass-like form. Although purity is unaffected, it may be difficult to extract the full quantity from the vial. In such a situation, we recommend that solutions are made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Bennett *et al* (2009) GH secretagogues and GH releasing peptides act as orthosteric super-agonists but not allosteric regulators for activation of the G protein Galpha(o1) by the Ghrelin receptor. Mol.Pharmacol. ***76*** 802. PMID: 19625579.

Mucciolo *et al* (2004) Ghrelin and des-acyl ghrelin both inhibit isoproterenol-induced lipolysis in rat adipocytes via a non-type 1a GH secretagogue receptor. Eur.J.Pharmacol. ***498*** 27. PMID: 15363972.

Patchett *et al* (1995) Design and biological activities of L-163,191 (MK-0677): a potent, orally active GH secretagogue. Proc.Natl.Acad.Sci.U.S.A. ***92*** 7001. PMID: 7624358.