

# Vildagliptin dihydrate

Catalog No: tcsc0042208



## Available Sizes

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg



## Specifications

**CAS No:**

2133364-01-7

**Formula:**

$C_{17}H_{29}N_3O_4$

**Pathway:**

Metabolic Enzyme/Protease

**Target:**

Dipeptidyl Peptidase

**Purity / Grade:**

>98%

**Solubility:**

10 mM in DMSO

**Alternative Names:**

LAF237 dihydrate;NVP-LAF 237 dihydrate

**Observed Molecular Weight:**

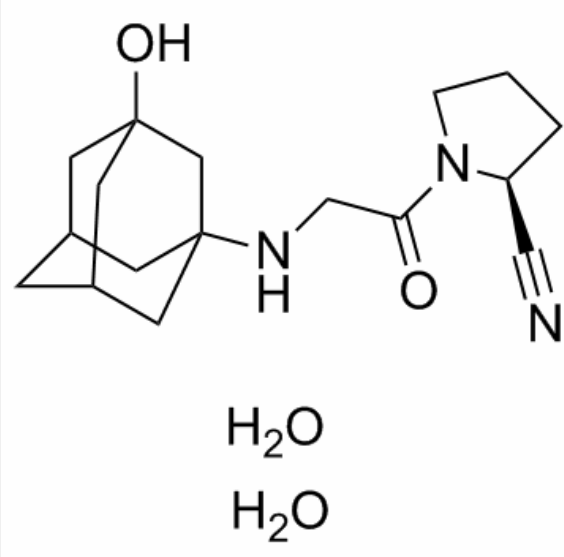
339.43

## Product Description

Vildagliptin (LAF237 dihydrate;NVP-LAF 237 dihydrate) is a **dipeptidyl peptidase 4 (DPP4)** inhibitor that delays the degradation of glucagon-like peptide-1 (GLP-1).

IC50 & Target: Target: Dipeptidyl Peptidase 4 (DPP4)<sup>[1]</sup>

**In Vivo:** Treatment of obese diabetic mice with 1 mg/kg/day Vildagliptin or with 10 mg/kg/day valsartan for 8 weeks increases pancreatic islet  $\beta$ -cell density and stimulates islet  $\beta$ -cell proliferation while preventing apoptosis and islet fibrosis and decreasing superoxide production and nitrotyrosine formation. The combination of both compounds significantly magnifies the beneficial effect of either monotherapy<sup>[1]</sup>. Valsartan or Vildagliptin pretreatment significantly increases plasma GLP-1 expression, reduces apoptosis of endothelial cells isolated from diabetic mice aorta. The expression of NADPH oxidase subunits also significantly decreases resulting in decreased superoxide production and ICAM-1 (fold change: valsartan :  $7.5 \pm 0.7$ , P[2]. Daily oral administration of Vildagliptin (5 mg/kg) alone or in combination with Pioglitazone (20 mg/kg) for 7 weeks significantly reduces blood glucose levels and HbA1c. It increases serum insulin levels and decreases serum glucagon. It also shows a strong anti-oxidant activity<sup>[3]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!