



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 ₃ O 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





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)^[1]

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 β -cell density and stimulates islet β -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^[1]. 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±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^[3].

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