Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

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

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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].