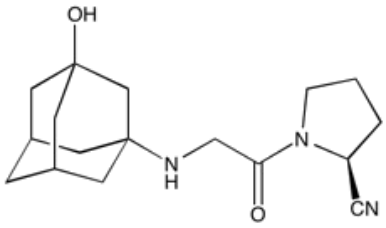
Catalog # 10-2887

Vildagliptin

(S)-1-[N-(3-Hydroxy-1-adamantyl)glycyl]pyrrolidine-2-carbonitrile

LAF237

Lot # X106112



A potent inhibitor of dipeptidyl peptidase IV (DPP IV), an enzyme that cleaves glucagon-like peptide 1 (GLP-1).[1] Delaying the degradation of GLP-1 extends the action of insulin and suppressing the release of glucagon which results in reduction in elevated blood glucose levels (hyperglycemia).[2] Clinically useful antidiabetic agent. Ameliorates cognitive deficits in streptozotocin-induced Alzheimers disease model.[3] Displays protective effects on β-cells by inhibition of ER stress in a mouse model.[4]

1) Balas *et al*. (2007), *the dipeptidyl peptidase IV inhibitor vildagliptin suppresses endogenous glucose production and enhances islet function after single-dose administration in type 2 diabetic patients*; J. Clin. Endocrinol. Metab., **92** 1249
2) Ahren *et al*. (2004), *Inhibition od dipeptidyl peptidase-4 reduces glycemia, sustains insulin levels and reduces glucagon levels in type 2 diabetes* J. Clin. Emdocrinol. Metab., **89** 2078
3) Kosaraju *et al*. (2013), *Vildagliptin: an anti-diabetes agent ameliorates cognitive deficits and pathology observed in streptozotocin-induced Alzheimer's disease*; J. Pharm. Pharmacol., **65** 1773
4) Shimizu *et al*. (2012), *DPP4 inhibitor vildagliptin preserves β-cell mass through amelioration of endoplasmic reticulum stress in C/EBPB transgenic mice*; J. Mol. Endocrinol., **49** 125

PHYSICAL DATA

Molecular Weight:	303.40
Molecular Formula:	$C_{17}H_{25}N_3O_2$
Purity:	98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (up to 45 mg/ml), DMF (up to 20 mg/ml), or ethanol (up to 20 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO, DMF, or ethanol may be stored at -20°C for up to 3 months.

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