Data Sheet (Cat.No.T72656)

TargetMol

Insulin degludec

Chemical Properties

CAS No. :	844439-96-9
Formula:	C274H411N65O81S6
Molecular Weight:	6103.97
Storage:	Keep away from moisture,Keep away from direct sunlight Powder: -20°C for 3 years | In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	Insulin degludec is an ultra-long-acting insulin analog developed for the study of hyperglycemia associated with type 1 and type 2 diabetes. Insulin degludec exhibits binding efficiency to the insulin receptor with an IC50 of 19.59 nM. Insulin degludec is applicable in diabetes research for evaluating pharmacological properties of basal insulin therapies.
Targets(IC50)	IGF-1R
In vitro	**Methods**: HL-1 cardiomyocytes were treated with Insulin degludec (200 nM, 0-60 min), and the phosphorylation level of Akt was detected by Western blot. **Results**: The phosphorylation level of Akt decreased after 5 and 10 minutes of Insulin degludec treatment. [2]
In vivo	**Methods**: Insulin degludec (5 U/kg, once daily for 30 consecutive days) was subcutaneously administered to diabetes mellitus mice to investigate the effects of Insulin degludec on vitis vinifera glucose homeostasis and hepatic metabolism in T1D mice under IIH conditions. **Results**: Insulin degludec significantly improved utetheisa kong fasting blood glucose, body weight gain, and serum AST and ALT activities in T1D mice, but exhibited a weaker response to IIH.[1]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.1638 mL	0.8191 mL	1.6383 mL
5 mM	0.0328 mL	0.1638 mL	0.3277 mL
10 mM	0.0164 mL	0.0819 mL	0.1638 mL
50 mM	0.0033 mL	0.0164 mL	0.0328 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Bataglini C, et al. Insulin degludec and glutamine dipeptide modify glucose homeostasis and liver metabolism in diabetic mice undergoing insulin-induced hypoglycemia. J Appl Biomed. 2021 Dec;19(4):210-219.
Hartmann T, et al. Effect of the long-acting insulin analogues glargine and degludec on cardiomyocyte cell signalling and function. Cardiovasc Diabetol. 2016 Jul