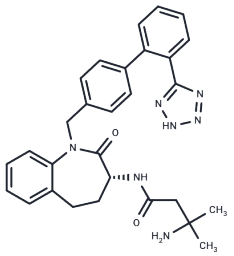
Data Sheet (Cat.No.T11798)

TargetMol

L-692429

Chemical Properties



CAS No. : 145455-23-8

Formula: C29H31N7O2

Molecular Weight: 509.614

Storage: 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	L-692429 (MK-0751) is a potent nonpeptidyl growth hormone secretagogue (GHS) agonist and benzolactam derivative, known for reversing glucocorticoid-induced inhibition of GH secretion. L-692429 exhibits high affinity for the G protein-coupled receptor and is useful in studying acromegaly and obesity.
Targets(IC50)	GHSR,GPCR19
In vitro	L-692429, a chemical compound, activates various cellular mechanisms, including intracellular calcium release, inositol phosphate (IP) turnover, cAMP-responsive element binding protein (CREB) activity, serum-responsive element activity, and bioluminescence resonance energy transfer (BRET) activity, with EC50 values of 26 nM, 47 nM, 60 nM, 63 nM, and 58 nM, respectively[2]. In experiments involving HeLa-T4 cells, those transiently expressing flag epitope-tagged growth hormone secretagogue (GHS) receptor and treated with L-692429 show a measurable increase in intracellular calcium, as detected by fluorometry using fluo-3/AM calcium indicator dye. This response is absent in untransfected HeLa-T4 cells, indicating the specificity of L-692429 for GHS receptor-expressing cells. Moreover, L-692429 treatment significantly enhances luciferase activity in these cells, suggesting that GHS receptor activation triggers the MAPK pathway[1].
In vivo	In anesthetized Wistar rats, L-756867 dose-dependently suppresses GH secretion stimulated by L-692429 (100 μg/kg), with complete inhibition achieved at an intravenous dose of 100 μg/kg of L-756867[3].

Solubility Information

Solubility	DMSO: 40 mg/mL (78.49 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (3.92 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.9623 mL	9.8114 mL	19.6228 mL
5 mM	0.3925 mL	1.9623 mL	3.9246 mL
10 mM	0.1962 mL	0.9811 mL	1.9623 mL
50 mM	0.0392 mL	0.1962 mL	0.3925 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

Cheng K, et al. Inhibition of L-692,429-stimulated rat growth hormone release by a weak substance P antagonist: L-756,867. J Endocrinol. 1997 Jan;152(1):155-8.

Holst B, et al. Nonpeptide and peptide growth hormone secretagogues act both as ghrelin receptor agonist and as positive or negative allosteric modulators of ghrelin signaling. Mol Endocrinol. 2005 Sep;19(9):2400-11.

Cunha SR, et al. Ghrelin and growth hormone (GH) secretagogues potentiate GH-releasing hormone (GHRH)-induced cyclic adenosine 3',5'-monophosphate production in cells expressing transfected GHRH and GH secretagogue receptors. Endocrinology. 2002 Dec;143(12):4570-82.