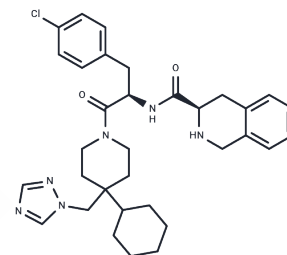


THIQ

Chemical Properties

CAS No. :	312637-48-2
Formula:	C ₃₃ H ₄₁ ClN ₆ O ₂
Molecular Weight:	589.17
Storage:	Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	THIQ is a selective melanocortin-4 receptor (MC4R) agonist (hMC4R and rMC4R with IC ₅₀ of 1.2 nM and 0.6 nM, respectively).
Targets(IC ₅₀)	Melanocortin Receptor
In vitro	THIQ, a small molecule agonist of the MC4R, on the cell surface expression and signaling of ten intracellularly retained MC4R mutants using different cell lines. THIQ increased the cell surface expression of three mutants (N62S, C84R, and C271Y) and two of them (N62S and C84R) had increased signaling in HEK293 cells. THIQ increased the signaling of two other mutants (P78L and P260Q) without increasing their cell surface expression in HEK293 cells. In neuronal cells, THIQ exhibited a more potent effect, correcting the cell surface expression and signaling of seven mutants (N62S, I69R, P78L, C84R, W174C, P260Q, and C271Y).

Solubility Information

Solubility	DMSO: 245 mg/mL (415.84 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: 5 mg/mL (8.49 mM), Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.6973 mL	8.4865 mL	16.973 mL
5 mM	0.3395 mL	1.6973 mL	3.3946 mL
10 mM	0.1697 mL	0.8487 mL	1.6973 mL
50 mM	0.0339 mL	0.1697 mL	0.3395 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

Huang H, et al. A small molecule agonist THIQ as a novel pharmacoperone for intracellularly retained melanocortin-4 receptor mutants. *Int J Biol Sci.* 2014 Jul 20;10(8):817-24.

Zhang, Yan, et al. Structural insights into ligand recognition and activation of the melanocortin-4 receptor. *Cell Research.* 2021, 31(11): 1163-1175.

Sun X , Liu M , Gao L , et al. A novel tetrahydroisoquinoline (THIQ) analogue induces mitochondria-dependent apoptosis[J]. *European Journal of Medicinal Chemistry*, 2018:S0223523418302526.

Sebhat IK, et al. Design and pharmacology of N-[(3R)-1,2,3,4-tetrahydroisoquinolinium-3-ylcarbonyl]-(1R)-1-(4-chlorobenzyl)-2-[4-cyclohexyl-4-(1H-1,2,4-triazol-1-ylmethyl)piperidin-1-yl]-2-oxoethylamine (1), a potent, selective, melanocortin subtype-4 receptor agonist. *J Med Chem.* 2002 Oct 10;45(21):4589-93.

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