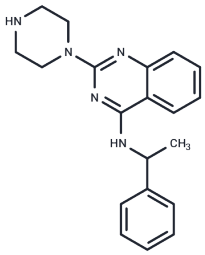
Data Sheet (Cat.No.T5383)

TargetMol

D3-βArr

Chemical Properties



CAS No. : 662164-09-2

Formula: C20H23N5

Molecular Weight: 333.43

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	D3-βArr (NCGC00379308) is a positive allosteric modulator for thyrotropin receptor (TSHR), which initiates translocation of β-Arr 1 (EC50: 11.6 μM) by direct TSHR activation.
Targets(IC50)	TSH Receptor
In vitro	D3-βArr stimulated β-Arr 1 translocation with an efficacy threefold greater than TSH. The EC50 for β-Arr 1 translocation by D3-βArr was 11.6 μM. D3-βArr (10 μM) increased the efficacy of TSH in the translocation of β-Arr 1 at a maximum of 5.1-fold over TSH alone.

Solubility Information

Solubility	DMSO: 100 mg/mL (299.91 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: 4 mg/mL (12 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	2.9991 mL	14.9957 mL	29.9913 mL
5 mM	0.5998 mL	2.9991 mL	5.9983 mL
10 mM	0.2999 mL	1.4996 mL	2.9991 mL
50 mM	0.060 mL	0.2999 mL	0.5998 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

Neumann S, et al. Discovery of a Positive Allosteric Modulator of the Thyrotropin Receptor: Potentiation of Thyrotropin-Mediated Preosteoblast Differentiation In Vitro. J Pharmacol Exp Ther. 2018 Jan;364(1):38-45.