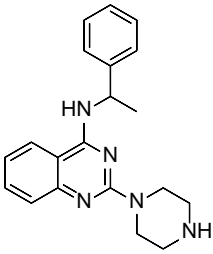


Product data sheet



MedKoo Cat#: 563811 Name: NCGC00379308 CAS: 662164-09-2 Chemical Formula: C ₂₀ H ₂₃ N ₅ Exact Mass: 333.1953 Molecular Weight: 333.439	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

NCGC00379308, also known as D3-βArr, is a Positive Allosteric Modulator (PAM) of the TSH receptor. D3-βArr potentiates the effect of TSH in stimulating β-Arr 1 translocation.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	81.0	242.92
Ethanol	33.0	98.97

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.00 mL	15.00 mL	30.00 mL
5 mM	0.60 mL	3.00 mL	6.00 mL
10 mM	0.30 mL	1.50 mL	3.00 mL
50 mM	0.06 mL	0.30 mL	0.60 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

Neumann S, Eliseeva E, Boutin A, Barnaeva E, Ferrer M, Southall N, Kim D, Hu X, Morgan SJ, Marugan JJ, Gershengorn MC. 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. doi: 10.1124/jpet.117.244095. Epub 2017 Oct 31. PMID: 29089368; PMCID: PMC5729612.

In vivo study

TBD

7. Bioactivity

Biological target:

NCGC00379308, also known as D3-βArr, is a Positive Allosteric Modulator (PAM) of the TSH receptor.

In vitro activity

In DiscoverX1 cells, D3-βArr stimulated β-Arr 1 translocation with a 5.1-fold greater efficacy than TSH and therefore potentiated the effect of TSH in stimulating β-Arr 1 translocation. D3-βArr alone had only a weak effect to upregulate these bone markers, but D3-βArr potentiated TSH-induced upregulation of ALPL and OPN mRNA levels 1.6-fold and 5.5-fold, respectively, at the maximum

Product data sheet



dose of ligands. Furthermore, the positive allosteric modulator effect of D3- β Arr resulted in an increase of TSH-induced secretion of OPN protein.

Reference: J Pharmacol Exp Ther. 2018 Jan;364(1):38-45. <https://pubmed.ncbi.nlm.nih.gov/29089368/>

In vivo activity

TBD

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.