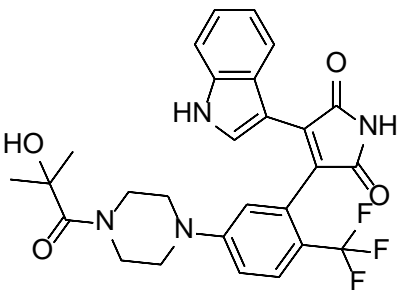


Product data sheet



MedKoo Cat#: 206831 Name: NIBR3049 CAS: 1260181-14-3 Chemical Formula: C ₂₇ H ₂₅ F ₃ N ₄ O ₄ Exact Mass: 526.1828 Molecular Weight: 526.5162	
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:

NIBR3049, also known as TCS-21311, is a potent and selective JAK3 inhibitor IC₅₀ values of 8 nM..

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	67.55	128.30

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.90 mL	9.50 mL	18.99 mL
5 mM	0.38 mL	1.90 mL	3.80 mL
10 mM	0.19 mL	0.95 mL	1.90 mL
50 mM	0.04 mL	0.19 mL	0.38 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

Tsujimoto H, Araoka T, Nishi Y, Ohta A, Nakahata T, Osafune K. Small molecule TCS21311 can replace BMP7 and facilitate cell proliferation in in vitro expansion culture of nephron progenitor cells. *Biochem Biophys Res Commun.* 2021 Jun 18;558:231-238. doi: 10.1016/j.bbrc.2020.02.130. Epub 2020 Feb 26. PMID: 32113685.

In vivo study

TBD

7. Bioactivity

Biological target:

TCS 21311 (NIBR3049) is a potent, highly selective JAK3 inhibitor with an IC₅₀ of 8 nM.

In vitro activity

Here, by performing chemical screening for BMP substitutes, this study identified a small molecule, TCS21311, that can replace BMP7 and revealed a novel inhibitory role of BMP7 in JAK3-STAT3 signaling in NPC expansion culture. Further, this study found that TCS21311 facilitates the proliferation of mouse embryonic NPCs and human induced pluripotent stem cell-derived NPCs when added to the expansion culture.

Reference: *Biochem Biophys Res Commun.* 2021 Jun 18;558:231-238. <https://pubmed.ncbi.nlm.nih.gov/32113685/>

Product data sheet



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.