

Product data sheet



MedKoo Cat#: 555760 Name: DJ-V-159 CAS: 2253744-53-3 Chemical Formula: C ₂₄ H ₁₂ F ₆ N ₄ O ₂ Exact Mass: 502.0864 Molecular Weight: 502.3764		
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:

DJ-V-159 is a novel small molecule agonist of GPRC6A, dose-dependently stimulates cAMP production in GPRC6A expressing HEK-293 cells at 0.2 nM. DJ-V-159 demonstrated the greatest potency in stimulating insulin secretion in β -cells and lowering serum glucose in wild-type mice.

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	15.5	30.85

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.99 mL	9.95 mL	19.91 mL
5 mM	0.40 mL	1.99 mL	3.98 mL
10 mM	0.20 mL	1.00 mL	1.99 mL
50 mM	0.04 mL	0.20 mL	0.40 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

1. Pi M, Kapoor K, Ye R, Hwang DJ, Miller DD, Smith JC, Baudry J, Quarles LD. Computationally identified novel agonists for GPRC6A. PLoS One. 2018 Apr 23;13(4):e0195980. doi: 10.1371/journal.pone.0195980. PMID: 29684031; PMCID: PMC5912754.

In vivo study

1. Pi M, Kapoor K, Ye R, Hwang DJ, Miller DD, Smith JC, Baudry J, Quarles LD. Computationally identified novel agonists for GPRC6A. PLoS One. 2018 Apr 23;13(4):e0195980. doi: 10.1371/journal.pone.0195980. PMID: 29684031; PMCID: PMC5912754.

7. Bioactivity

Biological target:

DJ-V-159 is an agonist for G protein-coupled receptor family C group 6 member A (GPRC6A).

In vitro activity

DJ-V-159 activates ERK in HEK-293 transfected with GPRC6A but not in non-transfected HEK-293 cells, with potency similar to L-Arg (Fig 5B). In addition, DJ-V-159 dose-dependently stimulated cAMP production in GPRC6A expressing HEK-293 cells, achieving a response at 0.2 nM concentrations in the media (Fig 5C).

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Reference: PLoS One. 2018 Apr 23;13(4):e0195980. <https://pubmed.ncbi.nlm.nih.gov/29684031/>

In vivo activity

DJ-V-159 at the dose of 10 mg/kg reduced blood glucose levels in wild-type mice at 60 and 90 minutes after intraperitoneal administration of 10 mg/kg (Fig 6B), whereas the vehicle (95% PEG + 5% DMSO) had no effect on blood glucose (Fig 6C). DJ-V-159 reduced blood glucose levels in wild-type mice by 43.6% and 41.9% at 60 and 90 minutes, respectively, after intraperitoneal administration of 10 mg/kg (Fig 4B).

Reference: PLoS One. 2018 Apr 23;13(4):e0195980. <https://pubmed.ncbi.nlm.nih.gov/29684031/>

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.