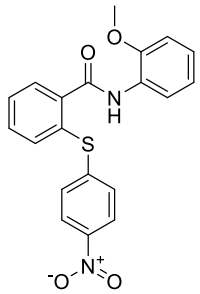
Product data sheet

MedKoo Cat#: 530947 Name: RN-18 CAS#: 431980-38-0 Chemical Formula: $C_{20}H_{16}N_2O_4S$ Exact Mass: 380.0831 Molecular Weight: 380.42	
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:
RN-18 is an HIV-1 Vif inhibitor. RN-18 antagonizes Vif function and inhibits HIV-1 replication only in the presence of A3G. RN-18 increases cellular A3G levels in a Vif-dependent manner and increases A3G incorporation into virions without inhibiting general proteasome-mediated protein degradation. RN-18 enhances Vif degradation only in the presence of A3G, reduces viral infectivity by increasing A3G incorporation into virions and enhances cytidine deamination of the viral genome.

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
DMF	30	78.86
DMSO	30	78.86

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	2.63 mL	13.14 mL	26.29 mL
5 mM	0.53 mL	2.63 mL	5.26 mL
10 mM	0.26 mL	1.31 mL	2.63 mL
50 mM	0.05 mL	0.26 mL	0.53 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. Nathans R, Cao H, Sharova N, Ali A, Sharkey M, Stranska R, Stevenson M, Rana TM. Small-molecule inhibition of HIV-1 Vif. Nat Biotechnol. 2008 Oct;26(10):1187-92. doi: 10.1038/nbt.1496. Epub 2008 Sep 21. PMID: 18806783; PMCID: PMC2693000.
2. Sinha C, Nischal A, Pant KK, Bandaru S, Nayarisseri A, Khattri S. Molecular docking analysis of RN18 and VEC5 in A3G-Vif inhibition. Bioinformation. 2014 Oct 30;10(10):611-6. doi: 10.6026/97320630010611. PMID: 25489169; PMCID: PMC4248342.

In vivo study

To be determined

7. Bioactivity
Biological target:

RN-18 inhibits Vif-mediated degradation of the DNA editing enzyme APOBEC3G with IC50 values of 10-30 µM in a high-throughput fluorescence screen. It inhibits viral replication of HIV-1 with IC50 values of 4.5 and 10 µM for nonpermissive CEM and H9 cells, respectively, and >100 µM for permissive cells.

Product data sheet

In vitro activity

RN-18 increases cellular A3G levels in a Vif-dependent manner and increases A3G incorporation into virions without inhibiting general proteasome-mediated protein degradation. RN-18 enhances Vif degradation only in the presence of A3G, reduces viral infectivity by increasing A3G incorporation into virions, and enhances cytidine deamination of the HIV genome.

Reference: Nat Biotechnol. 2008 Oct;26(10):1187-92. https://pubmed.ncbi.nlm.nih.gov/18806783/

In vivo activity

To be determined

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.