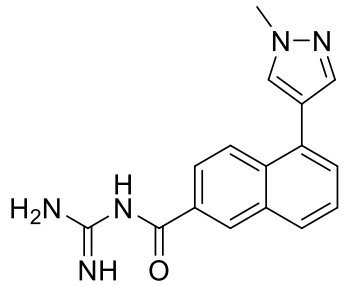
Product data sheet

MedKoo Cat#: 526920 Name: BIT225 CAS#: 917909-71-8 Chemical Formula: $C_{16}H_{15}N_5O$ Exact Mass: 293.1277 Molecular Weight: 293.33	
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:
BIT-225 is a NCp7 zinc finger inhibitor potentially for the treatment of HCV infection and HIV infection. BIT225 inhibits HIV-1 replication in myeloid dendritic cells.

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	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.41 mL	17.05 mL	34.09 mL
5 mM	0.68 mL	3.41 mL	6.82 mL
10 mM	0.34 mL	1.70 mL	3.41 mL
50 mM	0.07 mL	0.34 mL	0.68 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. Luscombe CA, Huang Z, Murray MG, Miller M, Wilkinson J, Ewart GD. A novel Hepatitis C virus p7 ion channel inhibitor, BIT225, inhibits bovine viral diarrhea virus in vitro and shows synergism with recombinant interferon-alpha-2b and nucleoside analogues. Antiviral Res. 2010 May;86(2):144-53. doi: 10.1016/j.antiviral.2010.02.312. Epub 2010 Feb 13. PMID: 20156486.
2. Khoury G, Ewart G, Luscombe C, Miller M, Wilkinson J. The antiviral compound BIT225 inhibits HIV-1 replication in myeloid dendritic cells. AIDS Res Ther. 2016 Feb 8;13:7. doi: 10.1186/s12981-016-0093-z. PMID: 26858771; PMCID: PMC4745167.

In vivo study

TBD

7. Bioactivity
Biological target:

BIT-225 is a NCp7 zinc finger inhibitor.

Product data sheet

In vitro activity

The anti-HIV-1 activity of BIT225 was evaluated in vitro within MDDC (monocyte-derived DC) alone and in co-cultures with activated CD4(+) T cells to examine the effect of the drug on HIV-1 transfer. Antiviral activity was determined by measuring HIV-1 reverse transcriptase activity in the culture supernatant of BIT225 treated and DMSO control cultures. Despite expected donor–donor variation in the level of HIV-1 infection of the MDDC, the antiviral activity of BIT225 was evident in all three donors compared to the DMSO controls (DMSO v BIT225 at Day 14, n = 2, p = 0.12). When represented as a mean (±SE) percentage of viral inhibition compared to the DMSO controls, the anti-HIV-1 activity of BIT225 increased over time with inhibition at 28.0 % (±87.9), 55.3 % (±12.2), 67.3 % (±11.0), and 74.5 % (±0.6) for days 8, 10, 11/12 and 14 respectively. In the co-cultures, a single BIT225 treatment of the infected MDDC resulted in a reduction in the transfer of HIV-1 from the MDDC to the uninfected CD4+ T cells when the source of HIV-1 was from de novo viral production, cis transfer. The antiviral effect of BIT225 increased over time following MDDC infection, such that increased exposure to BIT225 resulted in a decreased virus burden within the MDDC, leading to a reduction in HIV-1 transfer to the more permissive CD4+ T cell (DMSO v BIT225 at Day 12, n = 2, p = 0.12). These findings suggest a potential role for BIT225 in reducing HIV-1 production and preventing viral dissemination.

Reference: AIDS Res Ther. 2016 Feb 8;13:7. https://pubmed.ncbi.nlm.nih.gov/26858771/

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.