

Product data sheet



MedKoo Cat#: 406408 Name: NU-7026 CAS: 154447-35-5 Chemical Formula: C ₁₇ H ₁₅ NO ₃ Exact Mass: 281.1052 Molecular Weight: 281.3059		
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:

NU-7026 is a potent DNA-PK inhibitor with potential anticancer activity.

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	0.15	0.53
DMSO	2.10	7.48

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.55 mL	17.77 mL	35.55 mL
5 mM	0.71 mL	3.55 mL	7.11 mL
10 mM	0.36 mL	1.78 mL	3.55 mL
50 mM	0.07 mL	0.36 mL	0.71 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. Liu YY, Zhang WY, Zhang ML, Wang YJ, Ma XY, Jiang JH, Wang R, Zeng DX. DNA-PKcs participated in hypoxic pulmonary hypertension. *Respir Res.* 2022 Sep 16;23(1):246. doi: 10.1186/s12931-022-02171-x. PMID: 36114572; PMCID: PMC9479248.
2. Veuger SJ, Curtin NJ, Richardson CJ, Smith GC, Durkacz BW. Radiosensitization and DNA repair inhibition by the combined use of novel inhibitors of DNA-dependent protein kinase and poly(ADP-ribose) polymerase-1. *Cancer Res.* 2003 Sep 15;63(18):6008-15. PMID: 14522929.

In vivo study

1. Nöthen T, Sarabi MA, Weinert S, Zuschmitter W, Morgenroth R, Mertens PR, Braun-Dullaeus RC, Medunjanin S. DNA-Dependent Protein Kinase Mediates YB-1 (Y-Box Binding Protein)-Induced Double Strand Break Repair. *Arterioscler Thromb Vasc Biol.* 2023 Feb;43(2):300-311. doi: 10.1161/ATVBAHA.122.317922. Epub 2022 Dec 8. PMID: 36475703.

7. Bioactivity

Biological target:

NU 7026 (LY293646) is a novel specific DNA-PK inhibitor with IC₅₀ of 0.23 μM, also inhibits PI3K with IC₅₀ of 13 μM.

In vitro activity

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NU7026 (10 micro M) potentiated IR cytotoxicity [potentiation factor at 90% cell kill (PF(90)) = 1.51 +/- 0.04] in exponentially growing DNA-PK proficient but not deficient cells. When NU7026 and AG14361 were used in combination, their potentiating effects were additive (e.g., PF(90) = 2.81 +/- 0.19 in PARP-1(+/-) cells).

Reference: Cancer Res. 2003 Sep 15;63(18):6008-15. <https://pubmed.ncbi.nlm.nih.gov/14522929/>

In vivo activity

In mice, the local application of the specific DNA-PK inhibitor NU7026 via thermosensitive Pluronic F-127 gel around dilated arteries significantly reduced the phosphorylation of YB-1.

Reference: Arterioscler Thromb Vasc Biol. 2023 Feb;43(2):300-311. <https://pubmed.ncbi.nlm.nih.gov/36475703/>

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.