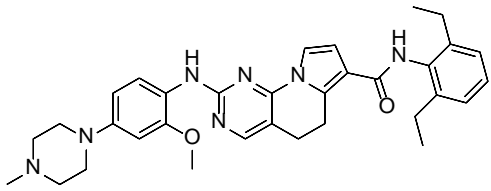


Product data sheet



MedKoo Cat#: 407828 Name: NTRC-0066-0 CAS: 1817791-73-3 Chemical Formula: C ₃₃ H ₃₉ N ₇ O ₂ Exact Mass: 565.3165 Molecular Weight: 565.722		
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:

NTRC-0066-0 is a highly potent and selective small molecule inhibitor of TTK. In cell lines and in mice, NTRC 0066-0 inhibits the phosphorylation of a TTK substrate and induces chromosome missegregation. NTRC 0066-0 inhibits tumor growth in MDA-MB-231 xenografts as a single agent after oral application. The combination of NTRC 0066-0 with a therapeutic dose of docetaxel resulted in doubling of mouse survival and extended tumor remission, without toxicity.

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	20.83	36.82

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.77 mL	8.84 mL	17.68 mL
5 mM	0.35 mL	1.77 mL	3.54 mL
10 mM	0.18 mL	0.88 mL	1.77 mL
50 mM	0.04 mL	0.18 mL	0.35 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. Cui CH, Wu Q, Zhou HM, He H, Wang Y, Tang Z, Zhang Y, Wang X, Xiao J, Zhang H. High tyrosine threonine kinase expression predicts a poor prognosis: a potential therapeutic target for endometrial carcinoma. *Ann Transl Med.* 2022 Dec;10(24):1352. doi: 10.21037/atm-22-5783. PMID: 36660721; PMCID: PMC9843307.

2. Libouban MAA, de Roos JADM, Uitdehaag JCM, Willemsen-Seegers N, Mainardi S, Dylus J, de Man J, Tops B, Meijerink JPP, Storchová Z, Buijsman RC, Medema RH, Zaman GJR. Stable aneuploid tumors cells are more sensitive to TTK inhibition than chromosomally unstable cell lines. *Oncotarget.* 2017 Jun 13;8(24):38309-38325. doi: 10.18632/oncotarget.16213. PMID: 28415765; PMCID: PMC5503534.

In vivo study

1. Maia AR, de Man J, Boon U, Janssen A, Song JY, Omerzu M, Sterrenburg JG, Prinsen MB, Willemsen-Seegers N, de Roos JA, van Doornmalen AM, Uitdehaag JC, Kops GJ, Jonkers J, Buijsman RC, Zaman GJ, Medema RH. Inhibition of the spindle assembly checkpoint kinase TTK enhances the efficacy of docetaxel in a triple-negative breast cancer model. *Ann Oncol.* 2015 Oct;26(10):2180-92. doi: 10.1093/annonc/mdv293. Epub 2015 Jul 7. PMID: 26153498.

Product data sheet



7. Bioactivity

Biological target:

NTRC 0066-0 is a selective threonine tyrosine kinase (TTK) inhibitor ($IC_{50}=0.9$ nM).

In vitro activity

This study shows that treatment of tumor cells with the selective small molecule TTK inhibitor NTRC 0066-0 overrides the mitotic checkpoint, irrespective of cell line sensitivity. In stable aneuploid cells NTRC 0066-0 induced acute CIN, whereas in cells with high levels of pre-existing CIN there was only a small additional fraction of cells mis-segregating their chromosomes.

Reference: Ann Transl Med. 2022 Dec;10(24):1352. <https://pubmed.ncbi.nlm.nih.gov/28415765/>

In vivo activity

In cell lines and in mice, NTRC 0066-0 inhibits the phosphorylation of a TTK substrate and induces chromosome missegregation. NTRC 0066-0 inhibits tumor growth in MDA-MB-231 xenografts as a single agent after oral application.

Reference: Ann Oncol. 2015 Oct;26(10):2180-92. <https://pubmed.ncbi.nlm.nih.gov/26153498/>

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.