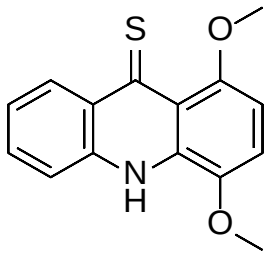
Product data sheet

MedKoo Cat#: 527750 Name: NSC625987 CAS: 141992-47-4 Chemical Formula: $C_{15}H_{13}NO_2S$ Exact Mass: 271.0667 Molecular Weight: 271.334	
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:
NSC625987, also known as Cdk4 Inhibitor II, is a highly selective inhibitor of CDK4/CyclinD1.

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	100.0	368.55

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.69 mL	18.43 mL	36.86 mL
5 mM	0.74 mL	3.69 mL	7.37 mL
10 mM	0.37 mL	1.84 mL	3.69 mL
50 mM	0.07 mL	0.37 mL	0.74 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. Diccianni MB, Yu J, Meppelink G, de Vries M, Shao L, Gebauer S, Shih H, Roberts W, Kilcoin NP, Pullen J, Carson DA, Yu AL. 3-amino thioacridone inhibits DNA synthesis and induce DNA damage in T-cell acute lymphoblastic leukemia (T-ALL) in a p16-dependent manner. J Exp Ther Oncol. 2004 Oct;4(3):223-37. PMID: 15724842.
2. Kubo A, Nakagawa K, Varma RK, Conrad NK, Cheng JQ, Lee WC, Testa JR, Johnson BE, Kaye FJ, Kelley MJ. The p16 status of tumor cell lines identifies small molecule inhibitors specific for cyclin-dependent kinase 4. Clin Cancer Res. 1999 Dec;5(12):4279-86. PMID: 10632371.

In vivo study

TBD

7. Bioactivity
Biological target:

NSC 625987 is a specific and high-affinity CDK4 inhibitor with an IC_{50} of 0.2 μM for CDK4:cyclin D1.

In vitro activity

One compound, 3-amino thioacridone (3-ATA; NSC 680434), whose growth-inhibitory activity correlated with the p16 status of the cell lines had an IC50 of 3.1 microM in a CDK4 kinase assay. ATP competition experiments demonstrated a noncompetitive mode of inhibition for 3-ATA (K(i) = 5.5 microM) and a linear mixed mode for benzothiadiazine (NSC 645787; K(i) = 0.73 microM).

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Reference: Clin Cancer Res. 1999 Dec;5(12):4279-86. https://pubmed.ncbi.nlm.nih.gov/10632371/

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.