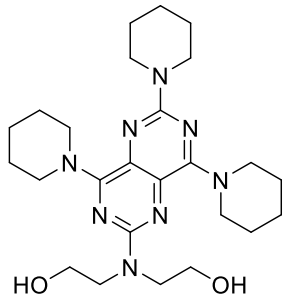
Product data sheet

MedKoo Cat#: 593099 Name: Dipyridamole tripiperidine CAS: 16982-40-4 Chemical Formula: $C_{25}H_{40}N_8O_2$ Exact Mass: 484.3274 Molecular Weight: 484.649	
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:
Dipyridamole tripiperidine is a biochemical.

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
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.06 mL	10.32 mL	20.63 mL
5 mM	0.41 mL	2.06 mL	4.13 mL
10 mM	0.21 mL	1.03 mL	2.06 mL
50 mM	0.04 mL	0.21 mL	0.41 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. Abdelghany L, El-Mahdy N, Kawabata T, Goto S, Li TS. Dipyridamole induces the phosphorylation of CREB to promote cancer cell proliferation. Oncol Lett. 2021 Apr;21(4):251. doi: 10.3892/ol.2021.12512. Epub 2021 Feb 3. PMID: 33664815; PMCID: PMC7882894.

2. Wang JD, Wang YY, Lin SY, Chang CY, Li JR, Huang SW, Chen WY, Liao SL, Chen CJ. Exosomal HMGB1 Promoted Cancer Malignancy. Cancers (Basel). 2021 Feb 19;13(4):877. doi: 10.3390/cancers13040877. PMID: 33669632; PMCID: PMC7921955.

In vivo study

1. Alyasiry E, Janabi A, Hadi N. Dipyridamole ameliorates doxorubicin-induced cardiotoxicity. J Med Life. 2022 Sep;15(9):1184-1190. doi: 10.25122/jml-2021-0199. PMID: 36415530; PMCID: PMC9635225.

2. Esmaeili S, Azizian S, Shahmoradi B, Moradi S, Shahlaei M, Khodarahmi R. Dipyridamole inhibits α-amylase/α-glucosidase at sub-micromolar concentrations; in-vitro, in-vivo and theoretical studies. Bioorg Chem. 2019 Jul;88:102972. doi: 10.1016/j.bioorg.2019.102972. Epub 2019 May 6. PMID: 31078769.

7. Bioactivity
Biological target:
Dipyridamole tripiperidine is a biochemical.

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In vitro activity

A MTT assay is used to evaluate the proliferation of cancer cells. The addition of dipyridamole (0–20 μM) increased the proliferation of U937 cells, parent HCT-8 cells and the $CD133^{+}/CD44^{+}$ stem-like subpopulation of HCT-8 cells in a dose-dependent manner (Fig. 1A).

Reference: Oncol Lett. 2021 Apr;21(4):251. https://pubmed.ncbi.nlm.nih.gov/33664815/

In vivo activity

Dipyridamole significantly ameliorated doxorubicin-induced cardiotoxicity in rats, as suggested by the significantly decreased inflammatory mediators TNF-α and IL-6 (Figures 1 and 2). Cardiac tissue level of the oxidative marker MDA significantly decreased (Figure 3) and also significantly increased in TAC (Figure 4) with the dipyridamole group compared to the doxorubicin-only group. Additionally, dipyridamole significantly attenuated doxorubicin-induced apoptosis, reflected by lower cardiac caspase-3 level (Figure 5) and significant elevation in Bcl-2 compared to the doxorubicin-only group (Figure 6).

Reference: J Med Life. 2022 Sep;15(9):1184-1190. https://pubmed.ncbi.nlm.nih.gov/36415530/

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.