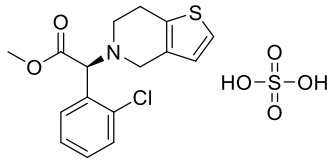


Product data sheet



MedKoo Cat#: 317556 Name: Clopidogrel sulfate CAS#: 120202-66-6 (sulfate) Chemical Formula: C ₁₆ H ₁₈ ClNO ₆ S ₂ Molecular Weight: 419.891	
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:

Clopidogrel (INN) is an oral, thienopyridine-class antiplatelet agent used to inhibit blood clots in coronary artery disease, peripheral vascular disease, cerebrovascular disease, and to prevent myocardial infarction (heart attack) and stroke. It is marketed by Bristol-Myers Squibb and Sanofi under the trade name Plavix. The drug works by irreversibly inhibiting a receptor called P2Y₁₂, an adenosine diphosphate (ADP) chemoreceptor on platelet cell membranes. Clopidogrel acts by inhibiting the ADP receptor on platelet cell membranes. It is a prodrug, which requires CYP2C19 for its activation.

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	45.42	108.18
DMF	10.0	23.82
DMF:PBS (pH 7.2) (1:4)	0.2	0.48
Ethanol	43.0	102.41
Water	47.55	113.24

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.38 mL	11.91 mL	23.82 mL
5 mM	0.48 mL	2.38 mL	4.76 mL
10 mM	0.24 mL	1.19 mL	2.38 mL
50 mM	0.05 mL	0.24 mL	0.48 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. Bayar E, Cevik M, Caker S, Cagatay P, Susleyici B. DNA Damage in AML-12 Hepatocytes and 3T3-L1 Adipocytes Treated with Clopidogrel. *Curr Drug Saf*. 2021 Jan 6. doi: 10.2174/1574886315666210106141936. Epub ahead of print. PMID: 33413066.

In vivo study

1. Roszkowska-Chojecka MM, Walkowska A, Sadowski J, Dobrowolski L. Clopidogrel Partially Counteracts Adenosine-5'-Diphosphate Effects on Blood Pressure and Renal Hemodynamics and Excretion in Rats. *Am J Med Sci*. 2018 Sep;356(3):287-295. doi: 10.1016/j.amjms.2018.04.013. Epub 2018 Apr 27. PMID: 30293555.

7. Bioactivity

Biological target:

Product data sheet



Clopidogrel hydrogen sulfate is an antiplatelet agent which works by blocking platelets from sticking together and prevents them from forming harmful clots.

In vitro activity

DNA fragmentation was found to be increased as a response to 7.5 μ M, 40 μ M and 75 μ M clopidogrel treatment compared to non-treated control groups in AML-12 hepatocytes ($p < 0.01$, $p < 0.001$, $p < 0.01$ respectively) and 3T3-L1 adipocytes ($p < 0.001$, $p < 0.001$ and $p < 0.001$ respectively). DNA damage levels as a response to clopidogrel treatment was found to be higher in 3T3-L1 adipocytes than AML-12 hepatocytes.

Reference: Curr Drug Saf. 2021 Jan 6. <https://pubmed.ncbi.nlm.nih.gov/33413066/>

In vivo activity

The effects of intravenous ADP infusions of 2-8mg/kg/hour were examined in anesthetized Wistar rats that were untreated or chronically pretreated with clopidogrel, 20mg/kg/24hours, a selective P2Y₁₂-R antagonist. ADP induced a gradual, dose-dependent 15% decrease of mean arterial pressure, a sustained increase of renal blood flow and a 25% decrease in renal vascular resistance. Clopidogrel pretreatment attenuated the mean arterial pressure decrease, and did not significantly alter renal blood flow or renal vascular resistance.

Reference: Am J Med Sci. 2018 Sep;356(3):287-295. <https://pubmed.ncbi.nlm.nih.gov/30293555/>

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.