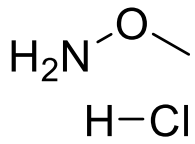
Product data sheet

MedKoo Cat#: 205650 Name: Methoxyamine HCl CAS#: 593-56-6 Chemical Formula: CH_6ClNO Molecular Weight: 83.51	
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:

Methoxyamine is an orally bioavailable small molecule inhibitor with potential adjuvant activity. Methoxyamine covalently binds to apurinic/apyrimidinic (AP) DNA damage sites and inhibits base excision repair (BER), which may result in an increase in DNA strand breaks and apoptosis. This agent may potentiate the anti-tumor activity of alkylating agents. Check for active clinical trials or closed clinical trials using this agent. (NCI Thesaurus).

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
H2O	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	11.97 mL	59.87 mL	119.75 mL
5 mM	2.39 mL	11.97 mL	23.95 mL
10 mM	1.20 mL	5.99 mL	11.97 mL
50 mM	0.24 mL	1.20 mL	2.39 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. Liuzzi M, Talpaert-Borlé M. A new approach to the study of the base-excision repair pathway using methoxyamine. J Biol Chem. 1985 May 10;260(9):5252-8. PMID: 2580833.

In vivo study

TBD

7. Bioactivity

Biological target:

Methoxyamine Hydrochloride is the hydrochloride salt form of methoxyamine, an alkoxyamine with potential chemotherapeutic adjuvant activity.

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In vitro activity

In this work the use of ['4C]methoxyamineto was investigated to detect DNA glycosylase activities. It was shown that the action of uracil-DNA glycosylase on a [3H]uracil-containing polydeoxyribonucleotide can be followed by measuring either the 13H]uracil released or the ['4C]methoxyamine incorporated in the AP s Therefore, the findings suggest that the counting of AP sites with ['4C]methoxyamine can constitute a general assay for all the DNA glycosylases It was showm that uracil-DNA glycosylase is not inhibited by methoxyamine concentrations up to 50 mM in the enzymatic reaction mixture. Therefore, the DNA glycosylase reaction can be performed in the presence of ['4C]methoxyamine Moreover, the presence of methoxyamine in the reaction mixture containing uracil-DNA glycosylase and AP endodeoxyribonuclease slows down the polymer degradation observed in the absence of methoxyamine. The protective effect of methoxyamine is due to the masking of the aldehyde function of the AP site which stabilizes the adjacent phosphodiester bond. In conclusion, ["C]methoxyamine offers the opportunity to efficiently study some enzymatic processes involved in the base-excision repair pathway. For example, it permits one to reversibly label AP sites, to follow the base removal under the action of a DNA glycosylase, and to reversibly block the endonucleolytic rupture of AP-DNA by AP endodeoxyribonuclease. Thus, methoxyamine could be an efficient tool to determine whether a lesion is specifically recognized by a DNA glycosylase or by a DNase.

Reference: J Biol Chem. 1985 May 10;260(9):5252-8. https://pubmed.ncbi.nlm.nih.gov/2580833/

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.