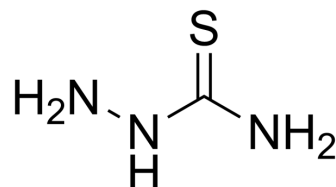


Thiosemicarbazide

| | | | |
|---------------------------|----------------------------------|-------|----------|
| Cat. No.: | HY-Y0032 | | |
| CAS No.: | 79-19-6 | | |
| Molecular Formula: | CH ₅ N ₃ S | | |
| Molecular Weight: | 91.14 | | |
| Target: | Orthopoxvirus | | |
| Pathway: | Anti-infection | | |
| Storage: | Powder | -20°C | 3 years |
| | | 4°C | 2 years |
| | In solvent | -80°C | 6 months |
| | | -20°C | 1 month |



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (1371.52 mM; Need ultrasonic)

| Concentration | Mass | | |
|---------------|------------|------------|-------------|
| | 1 mg | 5 mg | 10 mg |
| 1 mM | 10.9721 mL | 54.8607 mL | 109.7213 mL |
| 5 mM | 2.1944 mL | 10.9721 mL | 21.9443 mL |
| 10 mM | 1.0972 mL | 5.4861 mL | 10.9721 mL |

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Thiosemicarbazide is a vitamin B6 antagonist with anti-acne activity. Thiosemicarbazide is also a well-known source in the synthesis of heterocycles, and its derivatives have potential anticancer activity. Thiosemicarbazide (TSC: HL1) reacts with metal salts, urea (U), to prepare Co(II) and Cu(I) metal complexes. Thiosemicarbazide is also used in the fields of media communications and optical storage, and in the spectrophotometric detection of metals^{[1][2][3][1][2][3]}.

In Vivo

Thiosemicarbazide (20 µg/g, s.c.) induces abnormal behavior and convulsions in 1-day-old and 1-month-old guinea pigs^[3].
>
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Yamashita J. Susceptibility to thiosemicarbazide (an antagonist of vitamin B6), and phylogenetic and ontogenetic development of brain. J Nutr Sci Vitaminol (Tokyo). 1974;20(2):113-9.

[2]. Hamrani O, et al. Reaction of thiosemicarbazide with some divalent ions: Synthesis, characterization, molecular modeling, and evaluation of the catalytic and biological activity of the complexes[J]. Inorganic and Nano-Metal Chemistry, 2017, 47(7): 1070-1079.

[3]. Kozyra P, et al. Potential Anticancer Agents against Melanoma Cells Based on an As-Synthesized Thiosemicarbazide Derivative. Biomolecules. 2022 Jan 18;12(2):151.

Caution: Product has not been fully validated for medical applications. For research use only.

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