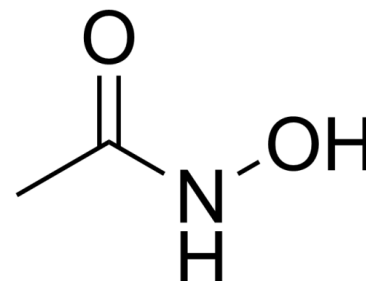


Data Sheet

| | |
|---------------------------|---|
| Product Name: | Acetohydroxamic acid |
| Cat. No.: | CS-4881 |
| CAS No.: | 546-88-3 |
| Molecular Formula: | C ₂ H ₅ NO ₂ |
| Molecular Weight: | 75.07 |
| Target: | Bacterial; HIV |
| Pathway: | Anti-infection |
| Solubility: | H ₂ O : 100 mg/mL (ultrasonic); DMSO : 233.33 mg/mL (ultrasonic) |



BIOLOGICAL ACTIVITY:

Acetohydroxamic acid is the inhibitor for bacterial and plant **urease** that can be used for chronic urinary tract infections. Acetohydroxamic acid selectively inhibits arachidonic acid 5-lipoxygenase that is useful in the research of asthma. Acetohydroxamic acid inhibits the formation of advanced glycation end products, and reduces oxidative stress and inflammatory responses. Acetohydroxamic acid exhibits antiviral activity against **HIV**^{[1][2][3]}. *In Vitro*: Acetohydroxamic acid (7 mM, 24 h) penetrates bacterial cells, inhibits **urease** in *Helicobacter pylori*, reduces the adhesion of *H. pylori* to gastric tissue, and exhibits antibacterial activity^[2]. Acetohydroxamic acid reduces the formation of advanced glycation end products (AGEs) (2.5-5 mM, 10-14 days), scavenges DPPH free radicals and hydroxyl free radicals (6 μM-50 mM, 30 min), and non-competitive inhibits semicarbazide-sensitive amine oxidase (SSAO) (0-50 μM, 1 min)^[3].

References:

- [1]. Sharma M, et al. Biotransformation of Acetamide to Acetohydroxamic Acid at Bench Scale Using Acyl Transferase Activity of Amidase of *Geobacillus pallidus* BTP-5x MTCC 9225. *Indian J Microbiol.* 2012 Mar;52(1):76-82.
- [2]. Umamaheshwari RB, et al., Receptor-mediated targeting of lipobeads bearing acetohydroxamic acid for eradication of *Helicobacter pylori*. *J Control Release.* 2004 Sep 14;99(1):27-40.
- [3]. Liu YH, et al., Antiglycation, radical scavenging, and semicarbazide-sensitive amine oxidase inhibitory activities of acetohydroxamic acid in vitro. *Drug Des Devel Ther.* 2017 Jul 13;11:2139-2147.

CAIndexNames:

Acetamide, N-hydroxy-

SMILES:

CC(NO)=O

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

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