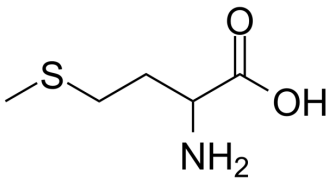
DL-Methionine

Cat. No.:	HY-N0325
CAS No.:	59-51-8
Molecular Formula:	$C_5H_{11}NO_2S$
Molecular Weight:	149.21
Target:	Parasite
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

1M HCl : 100 mg/mL (670.20 mM; ultrasonic and adjust pH to 1 with HCl)

H_2O : 33.33 mg/mL (223.38 mM; Need ultrasonic)

DMSO : < 1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble or slightly soluble)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	6.7020 mL	33.5098 mL	67.0196 mL
5 mM	1.3404 mL	6.7020 mL	13.4039 mL
10 mM	0.6702 mL	3.3510 mL	6.7020 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 10 mg/mL (67.02 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

BIOLOGICAL ACTIVITY

Description

DL-Methionine is an essential amino acid containing sulfur with oxidative stress defense effects. DL-Methionine can be used for animal natural feed. DL-Methionine also kills ***H. rostochiensis*** on potato plants[1][2][3].

IC_{50} & Target

H. rostochiensis[1]

In Vitro

The impact of DL-Methionine supplementation on animal performance interacts strongly with the crude protein (CP) content of the diet. Supplementation of DLM to a 20% crude protein diet for broilers reduces their abdominal fat weight, whereas this is not the case when the diet contained 23% CP. Breast meat yield is increased and abdominal fat content is decreased with increasing DL-Methionine supplementation, and this response is more pronounced in chickens reared on a diet with a lower protein level (20.5% CP) compared with a higher protein level (26%)[2].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	DL-methionine significantly decreases the numbers of males, females, cysts and eggs of H. rostochiensis on potato plants. DL-methionine kills almost all the nematodes when applied 3 days after inoculation, and DL-methionine does not affect plant growth adversely[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. K. evans, et al. Effects of amino acids on the reproduction of Heterodera rostochiensis. Nematologica, 1971, 17(4), 495-500.

[2]. Swennen Q, et al. Effects of dietary protein content and 2-hydroxy-4-methylthiobutanoic acid or DL-methionine supplementation on performance and oxidative status of broiler chickens. Br J Nutr. 2011 Dec;106(12):1845-54.

[3]. Garlich JD. Response of broilers to DL-methionine hydroxy analog free acid, DL-methionine, and L-methionine. Poult Sci. 1985 Aug;64(8):1541-8.

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