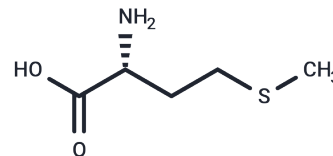


Methionine

Chemical Properties

CAS No. : 348-67-4
Formula: C₅H₁₁NO₂S
Molecular Weight: 149.21
Appearance: no data available
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	Methionine (D-Methionine) (MRX-1024; D-Methionine) is an effective chemoprotective agent which can also inhibit the neuronal activity through GABAA receptor activation.
Targets(IC50)	Endogenous Metabolite
In vitro	When human plasma is incubated with Methionine (D-methionine) and CP, a Pt-D-methionine complex forms, regardless of the sequence in which they are added. Initially, an early CP hydrolysis product combines with Methionine to create a 1:1 complex, which subsequently leads to a 2:1 compound over time. These Pt-D-methionine compounds are crucial in how Methionine shields mammalian organisms from CP-induced toxicities[2].
In vivo	Administration of Methionine (D-methionine) concurrently with cisplatin results in a cell density of 0.8 ± 0.070 (SEM), which is significantly higher than that observed in rats receiving cisplatin alone ($P < 0.01$), yet comparable to control groups and those treated with D-methionine only ($P > 0.05$). Solo administration of Methionine yields an average cell density of 0.95 ± 0.099 (SEM), also showing no significant difference from controls ($P > 0.05$)[3].

Solubility Information

Solubility	H ₂ O: 22.5 mg/mL (150.8 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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A DRUG SCREENING EXPERT

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	6.702 mL	33.5098 mL	67.0196 mL
5 mM	1.3404 mL	6.702 mL	13.4039 mL
10 mM	0.6702 mL	3.351 mL	6.702 mL
50 mM	0.134 mL	0.6702 mL	1.3404 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Wu C, et al. Antioxidants L-carnitine and D-methionine modulate neuronal activity through GABAergic inhibition. J Neural Transm (Vienna). 2014 Jul;121(7):683-93.

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