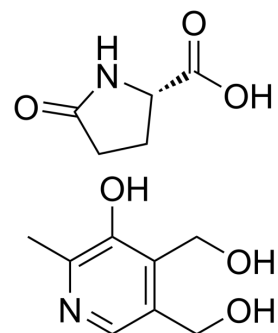


Metadoxine

Cat. No.:	HY-B1898
CAS No.:	74536-44-0
Molecular Formula:	C ₁₃ H ₁₈ N ₂ O ₆
Molecular Weight:	298.29
Target:	PKA
Pathway:	Stem Cell/Wnt; TGF-beta/Smad
Storage:	4°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

H₂O : ≥ 155 mg/mL (519.63 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.3524 mL	16.7622 mL	33.5244 mL
	5 mM	0.6705 mL	3.3524 mL	6.7049 mL
	10 mM	0.3352 mL	1.6762 mL	3.3524 mL

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

In Vivo

1. Add each solvent one by one: PBS
Solubility: 100 mg/mL (335.24 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Metadoxine blocks adipocyte differentiation in association with inhibition of the protein kinase A-cAMP response element binding protein (PKA-CREB) pathway.

In Vitro

Simultaneous Metadoxine treatment notably inhibits adipogenic differentiation in a dose-dependent manner. Metadoxine treatment from day 4 through day 8 is required for inhibition of MDI-induced preadipocyte differentiation^[1]. Metadoxine prevents glutathione depletion and the increase in lipid peroxidation damage caused by ethanol and acetaldehyde in HepG2 cells. In hepatic stellate cells, Metadoxine prevents the increase in collagen and attenuated TNF-α secretion caused by acetaldehyde. Thus, Metadoxine could be useful in preventing the damage produced in early stages of alcoholic liver disease as it prevents the redox imbalance of the hepatocytes and prevents TNF-α induction, one of the earliest events in hepatic damage^[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Yang YM, et al. Metadoxine, an ion-pair of pyridoxine and L-2-pyrrolidone-5-carboxylate, blocks adipocyte differentiation in association with inhibition of the PKA-CREB pathway. Arch Biochem Biophys. 2009 Aug 15;488(2):91-9.

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

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