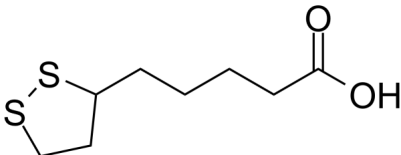


Certificate of Analysis

Catalog Number	BP16873
Product Name	α -Lipoic Acid

Physical and Chemical Properties

Synonyms	Lipoic acid, Alphasipoic acid
CAS No.	62-46-4
Chemical Formula	C ₈ H ₁₄ O ₂ S ₂
Molecular Weight	206.32
Solubility	DMSO: 10 mM
Storage	Powder: -20°C for 2 years In solvent: -80°C for 1 year
Chemical Structure OR Tested Image	

Product Information

Description	<p>α-Lipoic Acid inhibits NF-κB-dependent HIV-1 LTR activation. α-Lipoic Acid induces endoplasmic reticulum (ER) stress-mediated apoptosis in hepatoma cells. α-Lipoic Acid is an antioxidant, which is an essential cofactor of mitochondrial enzyme complexes.</p>
In vitro	<p>α-Lipoic Acid (Alpha-Lipoic acid, ALA) is a naturally occurring dithiol compound, plays an essential role in mitochondrial bioenergetics. It reduces lipid accumulation in the liver by regulating the transcriptional factors SREBP-1, FoxO1, and Nrf2, and their downstream lipogenic targets via the activation of the SIRT1/LKB1/AMPK pathway. Treatment of cells with α-Lipoic Acid (250, 500 and 1000 μM) significantly increases the NAD⁺/NADH ratio in HepG2 cells (P<0.05 or P<0.01). Treatment with α-Lipoic Acid (50, 125, 250 and 500 μM) increases SIRT1 activity in HepG2 cells. α-Lipoic Acid (50, 125, 250, 500 and 1000 μM) increases phosphorylation of AMPK and acetyl-CoA carboxylase (ACC) in HepG2 cells in a dose-dependent fashion</p>
In vivo	<p>Administration of α-Lipoic Acid (100 mg/kg or 200 mg/kg) markedly reduces visceral fat mass in mice. In addition, α-Lipoic Acid (100 mg/kg or 200 mg/kg) treatment inhibits the appetite and causes a dramatic weight loss (all P<0.05)</p>

Analytical Data

HPLC	Shows Min >99% purity
H-NMR	Consistent with structure
Stability and Solubility Advice	<p>Information on product stability, especially in solution, has rarely been reported and in most cases we can only provide a general guideline. We recommend that once the stock solution has been prepared, it be stored in equal quantities in sealed vials and used within 1 month. Avoid repeated freezing and thawing cycles. Storage conditions for some special products should be referred to their storage details.</p>

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