

Lipoic acid Datasheet

5th Edition (Revised in January, 2017)

[Product Information]

Name: Lipoic acid

Catalog No.: CFN99192

Cas No.: 62-46-4

Purity: >=98%

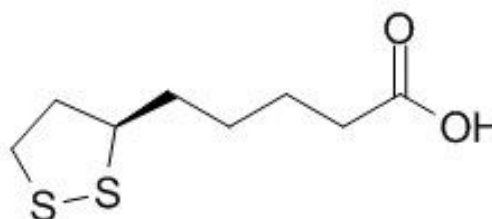
M.F: C₈H₁₄O₂S₂

M.W: 206.3

Physical Description: Yellow cryst.

Synonyms: 5-(1,2-Dithiolan-3-yl)valeric acid; 5-[(3R)-1,2-dithiolan-3-yl]pentanoic acid;

Alpha Lipoic Acid.



[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Synthetic precursor compounds;
5. Intermediates & Fine Chemicals;
6. Others.

[Source]

From Kidney, heart, liver, spinach, broccoli, and yeast extract.

[Biological Activity or Inhibitors]

Alpha-lipoic acid has become a common ingredient in multivitamin formulas, anti-aging supplements, and even pet food, it is well-defined as a therapy for preventing diabetic polyneuropathies, and scavenges free radicals, chelates metals, and restores intracellular glutathione levels which otherwise decline with age.^[1]

Alpha-lipoic acid can enhance glucose transport and utilization in different experimental and animal models, it can improve insulin sensitivity in patients with type-2 diabetes.^[2]

Lipoic acid is a novel treatment for Alzheimer's disease and related dementias.^[3]

Alpha-lipoic acid has therapeutic effects on joint inflammation and erosion in an animal model via NF-kappa B down regulation, it inhibits TNF-alpha induced NF-kappa B activation through blocking of MEKK1-MKK4-IKK signaling cascades.^[4]

[Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

[HPLC Method]^[5]

Mobile phase: Acetonitrile- 0.02M Ammonium acetate buffer(pH 4.6)=50:50 ;

Flow rate: 0.8 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 210 nm.

[Storage]

2-8°C, Protected from air and light, refrigerate or freeze.

[References]

[1] Shay K P, Moreau R F, Smith E J, *et al. Biochim. Biophys. Acta. 2009 Oct;1790(10): 1149-60.*

[2] Jacob S, Ruus P, Hermann R, *et al. Free Radic. Biol. Med., 1999 Aug;27(3-4):309-14.*

[3] Holmquist L, Stuchbury G, Berbaum K, *et al. Pharmacol. Ther.*, 2007 Jan;113(1):154-64.

[4] Lee C K, Lee E Y, Yong G K, *et al. Int. Immunopharmacol.*, 2008 Feb;8(2):362-70.

[5] Rajkumar B, Bhavya T, Kumar A A. *Int. J. Pharm. Pharmaceut. Sci.*, 2014, 6(1):307-12.

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