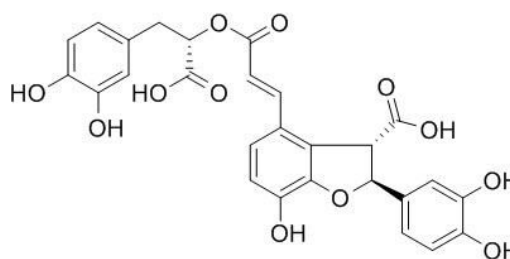


## Lithospermic acid Datasheet

4<sup>th</sup> Edition (Revised in July, 2016)**[ Product Information ]****Name:** Lithospermic acid**Catalog No.:** CFN98546**Cas No.:** 28831-65-4**Purity:** > 98%**M.F:** C<sub>27</sub>H<sub>22</sub>O<sub>12</sub>**M.W:** 538.46**Physical Description:** Powder**Synonyms:**

(2S,3S)-4-[(E)-3-[(1R)-1-carboxy-2-(3,4-dihydroxyphenyl)ethoxy]-3-oxoprop-1-enyl]-2-(3,4-dihydroxyphenyl)-7-hydroxy-2,3-dihydrobenzofuran-3-carboxylic acid;  
4-[3-[1-Carboxy-2-(3,4-dihydroxyphenyl)ethoxy]-3-oxo-1-propenyl]-2-(3,4-dihydroxyphenyl)-2,3-dihydro-7-hydroxy-3-benzofurancarboxylic acid; Lithospermic acid A.

**[ Intended Use ]**

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

**[ Source ]**

The roots of *Lithospermum ruderale*.

### **[ Biological Activity or Inhibitors ]**

Lithospermic acid (LSA), isolated from the roots of *Salvia miltiorrhiza*, has antioxidant effects, is a competitive inhibitor of xanthine oxidase (XO), can directly scavenge superoxide and inhibit superoxide production in vitro, and presents hypouricemic and anti-inflammatory actions in vivo.<sup>[1]</sup>

Lithospermic acid has inhibitory effects on proliferation and migration of rat vascular smooth muscle cells.<sup>[2]</sup>

Lithospermic acid derivatives from *Lithospermum erythrorhizon* can increase expression of serine palmitoyltransferase in human HaCaT cells.<sup>[3]</sup>

Lithospermic acid possesses anti-HIV activity.<sup>[4]</sup>

Treatment with lithospermic acid B has a preventive effect on the development of diabetic retinopathy in this animal model, probably because of its antioxidative effects and anti-inflammatory effects.<sup>[5]</sup>

Lithospermic acid can attenuate 1-methyl-4-phenylpyridine-induced neurotoxicity by blocking neuronal apoptotic and neuroinflammatory pathways.<sup>[6]</sup>

Lithospermic acid has hepatoprotective effects against carbon tetrachloride-induced liver oxidative damage in vitro and in vivo.<sup>[7]</sup>

Lithospermic acid can attenuate mesenteric ischemia reperfusion injury in rat intestines by increasing tissue SOD and GPx activities and decreasing MDA and MPO levels, also improves morphological alterations which occurred after periods of reperfusion.<sup>[8]</sup>

### **[ Solvent ]**

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

### **[ HPLC Method ]<sup>[9]</sup>**

Mobile phase: Acetonitrile-3% Formic acid H<sub>2</sub>O, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: 30 °C;

The wave length of determination: 280 nm.

## **[ Storage ]**

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

## **[ References ]**

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- [5] Jin C J, Yu S H, Wang X M, *et al. Plos One*, 2014, 9(6):e98232-e98232.
- [6] Lin Y L, Tsay H J, Lai T H, *et al. J. Biomed. Sci.*, 2015, 22(1):1-13.
- [7] Chan, Ho. *Oncol. Rep.*, 2015, 34(2):673-80.
- [8] Ozturk H, Terzi E H, Ozgen U, *et al. Adv. Clin. Exp. Med.*, 2012, 21(4):433-9.
- [9] Lu Y, Wu S W , Xu D H. *China J. Chinese Materia Medica*, 2015, 40(9):1744-6.

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