

Catalog	Unit
TBI5094-5G	5 g
TBI5094-25G	25 g

### Product Details

**Formal Name:** 1,2-dithiolane-3-pentanoic acid, racemic

**Alternate Names:** Thiocetic acid

**Molecular Formula:** C<sub>8</sub>H<sub>14</sub>O<sub>2</sub>S<sub>2</sub>

**Formula Weight:** 206.30

**CAS Number:** 1077-28-7

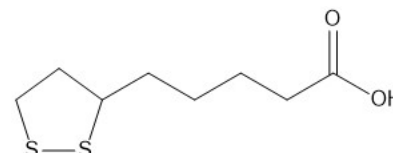
**Purity:** >98%

**Formulation:** powder

**Solubility:** Soluble in DMSO (up to at least 30 mg/ml)

**Storage:** -20°C

**Stability:**  $\geq$  2 years.



### Applications

Endogenous antioxidant and cofactor

### Functions

alpha-Lipoic acid is an endogenous antioxidant. Treatment with alpha-lipoic acid increased hepatic nuclear Nrf2 levels, induced Nrf2-mediated gene transcription, and reversed age-related decline in hepatic glutathione levels in a rat model. It is an essential cofactor required for catalysis by multiple mitochondrial enzymes including pyruvate dehydrogenase,  $\alpha$ -ketoglutarate dehydrogenase and branched-chain ketoacid dehydrogenase among others. It has shown efficacy as a treatment in diabetic neuropathy.

### Application Procedures

First dissolved in DMSO (up to at least 30 mg/ml), then diluted to aqueous buffer. Solutions in DMSO may be stored under an inert atmosphere at -20°C for up to 1 month.

**For research use only.**