

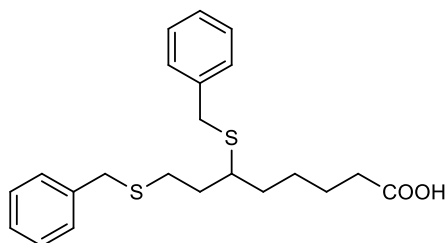
Catalog # 10-3519

CPI-613

CAS# 95809-78-2

6,8-bis(Benzylthio-octanoic acid); Devimistat

Lot # X108423



Lipoic acid analog which potently disrupts mitochondrial metabolism with selectivity for tumor cells *in vitro* and shows strong antitumor activity *in vivo*.¹ Inhibits alpha-ketoglutarate dehydrogenase (KGDH) by a redox mechanism selectively in tumor cells.² Inhibits pyruvate dehydrogenase (PDH) as a mechanistically distinct, non-redox, effect.^{1,2} A novel anticancer agent with a mitochondria-targeted mode of action with non-genotoxic properties.³ Has been used (along with PS48) to induce a Warburg-like metabolic state in fibroblasts.⁴ Combination treatment of CPI-613 and chloroquine inhibits the progression of clear cell sarcoma in a mouse model.⁵

- 1) Zachar *et al.* (2011), *Non-redox-active Lipoate Derivates Disrupt Cancer Cell Mitochondrial Metabolism and Are Potent Anticancer Agents in Vivo*; J. Mol. Med. (Berl), **89** 1137
- 2) Stuart *et al.* (2014), *A Strategically designed Small Molecule Attacks Alpha-ketoglutarate Dehydrogenase in Tumor Cells Through a Redox Process*; Cancer Metab., **2** 4
- 3) Dorsam and Fahrer (2016), *The Disulfide Compound α -lipoic Acid and Its Derivatives: A Novel Class of Anticancer Agents Targeting Mitochondria*; Cancer Lett., **371(1)** 12
- 4) Mordhorst *et al.* (2018), *Pharmacologic Reprogramming Designed to Induce a Warburg Effect in Porcine Fetal Fibroblasts Alters Gene Expression and Quantities of Metabolites From Conditioned Media Without Increased Cell Proliferation*; Cell Reprogram., **20** 38
- 5) Egawa *et al.* (2018), *Therapeutic Potential of CPI-613 for Targeting Tumorous Mitochondrial Energy Metabolism and Inhibiting Autophagy in Clear Cell Sarcoma*; PLoS One, **13(6)** e0198940

PHYSICAL DATA

Molecular Weight:	388.59
Molecular Formula:	C ₂₂ H ₂₈ O ₂ S ₂
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 30 mg/ml) or Ethanol (up to 20 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

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