

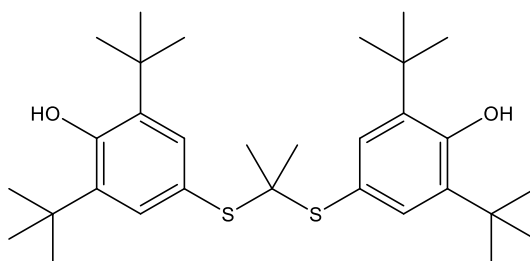
Catalog # 10-2679

Probucol

CAS# 23288-49-5

4,4'-[(1-Methylethylidene)bis(thio)]bis[2,6-bis(1,1-dimethylethyl)-phenol]; DH-581

Lot # R102337



Probucol is a unique antilipidemic drug which inhibits the oxidation of LDL cholesterol preventing the genesis of macrophage-derived foam cells and thus suppressing the formation of atherosclerotic vascular lesions.¹ It inhibits ABCA1-mediated cholesterol efflux without influencing scavenger receptor (class B type 1)-mediated efflux.² It enhances mitophagy and improves survival, locomotor function and dopaminergic neuron loss in zebrafish and fly models of mitochondrial damage.³ It attenuates NF-κB/NLRP3 signaling and augments Nrf-2-mediated antioxidant defense in nerve injury models.⁴ Improves learning and memory in aging mice.⁵ It protects neuronal cells against peroxide-induced damage and directly activates glutathione peroxidase-1.⁶

- 1) Yamamoto et al. (2013), *A unique antilipidemic drug - Probucol*; J. Atheroscler. Thromb. **15** 304
- 2) Favari et al. (2004), *Probucol inhibits ABCA1-mediated cellular lipid efflux*; Arterioscler. Thromb. Vasc. Biol. **24** 2345
- 3) Moskal et al. (2023), *An AI-guided screen identifies probucol as an enhancer of mitophagy through modulation of lipid droplets*; PLoS Biol. **21** e3001977
- 4) Derangula et al. (2022), *Probucol attenuates NF-κB/NLRP3 signaling and augments Nrf-1 mediated antioxidant defence in nerve injury induced neuropathic pain*; Int. Immunopharmacol. **102** 108397
- 5) Xie et al. (2021), *Effects and mechanisms of probucol on aging-related hippocampus-dependent cognitive impairment*; Biomed. Pharmacother. **144** 112266
- 6) Santos et al. (2020), *Probucol Protects Neuronal Cells Against Peroxide-Induced Damage and Directly Activates Glutathione Peroxidase-1*; Mol. Neurobiol. **57** 3245

PHYSICAL DATA

Molecular Weight:	516.84
Molecular Formula:	C ₃₁ H ₄₈ O ₂ S ₂
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	Soluble in DMSO (100 mg/ml); Ethanol (50 mg/ml)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied 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 1 month.

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