Perhexiline (maleate)

**CAS Registry No.:** 6724-53-4

**Formal Name:** 2-(2,2-dicyclohexylethyl)-piperidine, 2Z-butenedioate

**MF:** C_{31}H_{35}N • C_4H_4O_4

**FW:** 393.6

**Purity:** ≥95%

**Stability:** ≥2 years at -20°C

**Supplied as:** A crystalline solid

**UV/Vis.:** λ_{max} ~ 210 nm

**Laboratory Procedures**

For long term storage, we suggest that perhexiline (maleate) be stored as supplied at -20°C. It should be stable for at least two years.

Perhexiline (maleate) is supplied as a crystalline solid. A stock solution may be made by dissolving the perhexiline (maleate) in the solvent of choice. Perhexiline (maleate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of perhexiline (maleate) in these solvents is approximately 5, 30, and 25 mg/ml, respectively.

For maximum solubility in aqueous buffers, perhexiline (maleate) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Perhexiline (maleate) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO/PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Perhexiline is a carnitine palmitoyltransferase 1 (CPT1) and CPT2 inhibitor that was originally developed as an anti-anginal drug in the 1970s. It inhibits rat heart and liver CPT1 (IC_{50} = 77 and 148 µM, respectively) and rat heart CPT2 (IC_{50} = 79 µM). Inhibition of CPT reduces uptake of long-chain fatty acids into the mitochondria, thereby shifting cellular metabolism from β-oxidation to glycolysis. Perhexilin inhibits mTORC1 signaling at 10 µM and induces autophagy ~7-fold at a concentration of 10 µM in MCF-7 cells.

**References**


**Related Products**

For a list of related products please visit: [www.caymanchem.com/catalog/16982](http://www.caymanchem.com/catalog/16982)

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**WARNING:** This product is for laboratory research only; not for administration to humans. Not for human or veterinary diagnostic or therapeutic use.

**SAFETY DATA**

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent to your institution.

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