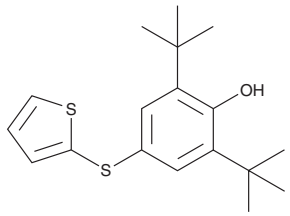
PRODUCT INFORMATION

RC363

Item No. 31407

CAS Registry No.: 2584411-86-7
Formal Name: 2,6-*bis*(1,1-dimethylethyl)-4-(2-thienylthio)-phenol
MF: $C_{18}H_{24}OS_2$
FW: 320.5
Purity: ≥98%
UV/Vis.: λ_{max}: 249 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

RC363 is supplied as a crystalline solid. A stock solution may be made by dissolving the RC363 in the solvent of choice, which should be purged with an inert gas. RC363 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of RC363 in these solvents is approximately 30 mg/ml.

Description

RC363 is an inhibitor of ferroptosis and a derivative of the antioxidant and hypocholesterolemic agent probucol (Item No. 15043).[1] It reduces 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) radicals by approximately 40% in a cell-free assay when used at a concentration of 25 µM. RC363 prevents glutamate-induced toxicity in HT22 cultured hippocampal cells (IC_{50} = 234.5 nM) but does not reduce oxidant levels in these cells. It increases the levels of glutathione peroxidase 1 (GPX1) and the activity of GPX in glutamate-challenged HT22 cells when used at a concentration of 3 µM. RC363 inhibits ferroptosis induced by the GPX4 inhibitor RSL3 in HT22 cells (IC_{50} = 173.6 nM).

Reference

1. Bueno, D.C., Canto, R.F.S., de Souza, V., *et al.* New probucol analogues inhibit ferroptosis, improve mitochondrial parameters, and induce glutathione peroxidase in HT22 cells. *Mol. Neurobiol.* **57(8)**, 3273-3290 (2020).

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