Cryptotanshinone
Item No. 16987

CAS Registry No.: 35825-57-1
Formal Name: (1R)-1,2,6,7,8,9-hexahydro-1,6,6-trimethyl-phenanthro[1,2-b]furan-10,11-dione
MF: C_{19}H_{20}O_{3}
FW: 296.4
Purity: ≥95%
UV/Vis.: λ_{max}: 220, 264, 271, 361, 439 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years

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

Laboratory Procedures

Cryptotanshinone is supplied as a crystalline solid. A stock solution may be made by dissolving the cryptotanshinone in the solvent of choice, which should be purged with an inert gas. Cryptotanshinone is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of cryptotanshinone in these solvents is approximately 0.25 and 1 mg/ml, respectively.

Description

Cryptotanshinone is a natural quinoid diterpene first isolated from *Salvia miltiorrhiza* roots, which are used in traditional Chinese medicine for a variety of conditions. Cryptotanshinone, at 10-20 µM, stimulates AMP-activated protein kinase in C2C12 myotubes and activates p38 MAPK in DU145 cells. It inhibits the protein tyrosine phosphatase SHP2 *in vitro* (IC_{50} = 22.5 µM) and, at 4-8 µM, blocks phosphorylation of STAT3 in MC-3 cells. Cryptotanshinone has a variety of anti-cancer actions, including inhibition of cell proliferation, induction of apoptosis, and reduction in angiogenesis. However, it is poorly absorbed and has low bioavailability in vivo.

References