TPI-1
Item No. 22480

CAS Registry No.: 79756-69-7
Formal Name: 2-(2,5-dichlorophenyl)-2,5-
cyclohexadiene-1,4-dione
Synonym: Tyrosine Phosphatase Inhibitor 1
MF: C_{12}H_{6}Cl_{2}O_{2}
FW: 253.1
Purity: ≥98%
UV/Vis.: λ_{max}: 229 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

TPI-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the TPI-1 in the solvent of choice. TPI-1 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of TPI-1 is approximately 1 mg/ml in ethanol and approximately 30 mg/ml in DMSO and DMF.

Description

TPI-1 is an inhibitor of protein tyrosine phosphatases. TPI-1 (10 ng/ml) increases phosphorylated substrates of the phosphatase SHP-1 in Jurkat T cells, including pLck-pY394, pZap70, and pSlp76. It is selective for SHP-1 over SHP-2, having low activity at the SHP-2 substrate pERK1/2. It increases pLck-pY394 levels by approximately 3.3-fold and increases the number of IFN-γ+ cells in mouse spleen ex vivo following a dose of approximately 3 mg/kg. Oral administration of TPI-1 (3 mg/kg per day) inhibits tumor growth in a B16 melanoma mouse xenograft model.

Reference