PRODUCT INFORMATION

TIQ-A
Item No. 16112

CAS Registry No.: 420849-22-5
Formal Name: thieno[2,3-c]isoquinolin-5(4H)-one
MF: C_{11}H_{7}N_{2}O_{S}
FW: 201.2
Purity: ≥98%
UV/Vis.: λ_{max}: 230, 341, 355 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

TIQ-A is supplied as a crystalline solid. A stock solution may be made by dissolving the TIQ-A in the solvent of choice, which should be purged with an inert gas. TIQ-A is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of TIQ-A in these solvents is approximately 0.5, 10, and 15 mg/ml, respectively.

TIQ-A is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, TIQ-A should first be dissolved in DMF and then diluted with the aqueous buffer of choice. TIQ-A has a solubility of approximately 0.1 mg/ml in a 1:8 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Poly(ADP-ribose) polymerase 1 (PARP1) is a critical DNA repair enzyme involved in DNA single-strand break repair via the base excision repair pathway. PARP1 is triggered by DNA damage and its excessive activation has been proposed as a causative factor in many pathological conditions including ischemia and reperfusion injury, asthma-related inflammation, and atherogenesis.\(^1-3\) TIQ-A is a PARP1 inhibitor (IC\(_{50}\) = 450 nM in cultured mouse cortical neurons).\(^1\) It displays neuroprotective effects in cultured mouse cortical neurons injured by oxygen-glucose deprivation (IC\(_{50}\) = 0.15 µM). TIQ-A has been used to inhibit eosinophilic infiltration into airways of OVA-challenged mice and to induce the regression of atherosclerotic plaques in high-fat fed apolipoprotein E\(^{-/-}\) mice.\(^2,3\)

References