

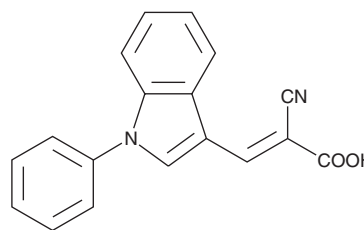
PRODUCT INFORMATION



UK 5099

Item No. 16980

CAS Registry No.: 56396-35-1
Formal Name: 2-cyano-3-(1-phenyl-1H-indol-3-yl)-2-propenoic acid
MF: C₁₈H₁₂N₂O₂
FW: 288.3
Purity: ≥95%
UV/Vis.: λ_{max}: 210, 250, 383 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

UK 5099 is supplied as a crystalline solid. A stock solution may be made by dissolving the UK 5099 in the solvent of choice. UK 5099 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of UK 5099 in these solvents is approximately 5 and 15 mg/ml, respectively.

UK 5099 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, UK 5099 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. UK 5099 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

UK 5099 is a potent inhibitor of the mitochondrial pyruvate carrier (MPC) that inhibits pyruvate-dependent oxygen consumption by rat heart mitochondria (IC₅₀ = 50 nM).¹ It decreases glucose flux to the TCA cycle and increases production of M6 citrate via glutaminolytic flux through malic enzymes without affecting ATP-linked or uncoupled oxygen consumption in C2C12 myotubes when used at a concentration of 10 mM.² UK 5099 decreases ATP-linked and uncoupled oxygen consumption in C2C12 myotubes when used in combination with BPTES (Item No. 19284) and/or etomoxir (Item No. 11969).

References

1. Halestrap, A.P. The mitochondrial pyruvate carrier: Kinetics and specificity for substrates and inhibitors. *Biochem. J.* **148**(1), 85-96 (1975).
2. Vacanti, N.M., Divakaruni, A.S., Green, C.R., et al. Regulation of substrate utilization by the mitochondrial pyruvate carrier. *Mol. Cell* **56**(3), 425-435 (2014).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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