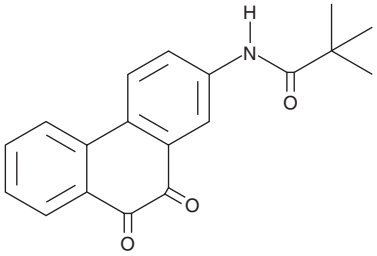
PRODUCT INFORMATION

SF1670

Item No. 15368

CAS Registry No.:	345630-40-2
Formal Name:	N-(9,10-dihydro-9,10-dioxo-2-phenanthrenyl)-2,2-dimethyl-propanamide
MF:	$C_{19}H_{17}NO_3$
FW:	307.4
Purity:	≥XX%
UV/Vis.:	λ_{max}: 213, 279, 448 nm
Supplied as:	A 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

SF1670 is supplied as a solid. A stock solution may be made by dissolving the SF1670 in the solvent of choice, which should be purged with an inert gas. SF1670 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of SF1670 in these solvents is approximately 10 mg/ml.

SF1670 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SF1670 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. SF1670 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Phosphatase and tensin homology on chromosome 10 (PTEN) functions as a key regulatory enzyme in many signal transduction pathways by dephosphorylating proteins and lipids including Akt and phosphatidylinositol 3,4,5-trisphosphate (PIP_3). SF1670 specifically binds to the active site of PTEN inhibiting its activity with an IC_{50} value of 2 µM.[1,2] At nanomolar concentrations it increases cellular PIP_3 levels, phosphorylation of Akt, and glucose uptake in adipocytes.[2,3] Pretreatment with SF1670 has been used to enhance PIP_3 signaling in transplanted neutrophils, augmenting their function at sites of infection in neutropenic recipient mice.[3]

References

1. Garlich, J.R., Durden, D.L., Georgiadis, T.M., *et al*. PTEN inhibitors. *Mafore Pharmaceuticals, Inc.* **WO2005/097119A2** (2005)
2. Rosivatz, E., Matthews, J.G., McDonald, N.Q., *et al*. A small-molecule inhibitor for phosphatase and tensin homologue deleted on chromosome 10 (PTEN). *ACS Chem. Biol.* **1(12)**, 780-790 (2006).
3. Li, Y., Prasad, A., Jia, Y., *et al*. Pretreatment with phosphatase and tensin homolog deleted on chromosome 10 (PTEN) inhibitor SF1670 augments the efficacy of granulocyte transfusion in a clinically relevant mouse model. *Blood* **117(24)**, 6702-6713 (2011).

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