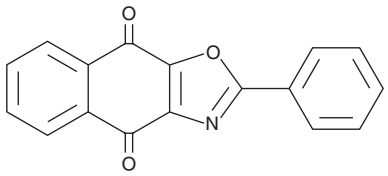
PRODUCT INFORMATION

SJB2-043

Item No. 36605

CAS Registry No.: 63388-44-3
Formal Name: 2-phenyl-naphth[2,3-d]oxazole-4,9-dione
MF: $C_{17}H_9NO_3$
FW: 275.3
Purity: ≥98%
UV/Vis.: λ_{max}: 277 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

SJB2-043 is supplied as a solid. A stock solution may be made by dissolving the SJB2-043 in the solvent of choice, which should be purged with an inert gas. SJB2-043 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of SJB2-043 in these solvents is approximately 1 and 2 mg/ml, respectively.

Description

SJB2-043 is an inhibitor of the ubiquitin-specific peptidase 1 (USP1) and USP1-associated factor 1 (UAF1) complex (USP1-UAF1 complex; IC_{50} = 0.544 µM for its deubiquitinase activity) and severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) papain-like protease (PL^{pro}).[1,2] It reduces the levels of USP1, DNA-binding protein inhibitor 1 (ID-1), ID-2, and ID-3 in K562 chronic myelogenous leukemia (CML) cells when used at concentrations ranging from 0.5 to 10 µM, an effect that can be partially blocked by the proteasome inhibitor MG132.[1] SJB2-043 decreases the viability of K562 cells (EC_{50} = 1.07 µM) and induces apoptosis in K562 cells in a concentration-dependent manner. It also inhibits SARS-CoV-2 PL^{pro} with IC_{50} values of 0.56 and 0.091 µM using the fluorogenic substrates Z-LRGG-AMC (Item No. 26641) or ubiquitin-AMC (Ub-AMC), respectively, as PL^{pro} substrates.[2]

References

1. Mistry, H., Hsieh, G., Buhrlage, S.J., *et al.* Small-molecule inhibitors of USP1 target ID1 degradation in leukemic cells. *Mol. Cancer Ther.* **12(12)**, 2651-2662 (2013).
2. Cho, C.-C., Li, S.G., Lalonde, T.J., *et al.* Drug repurposing for the SARS-CoV-2 papain-like protease. *ChemMedChem* **17(1)**, e202100455 (2022).

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