

Product Data Sheet

Product Name: DPBQ
Cat. No.: GC33384

Chemical Properties

Cas. No. 7029-89-2

SMILES O=C(C1=CC=CC=C12)C3=C(N=C(C4=CC=CC=C4)C(C5=CC=CC=C5)=N3)C2=O

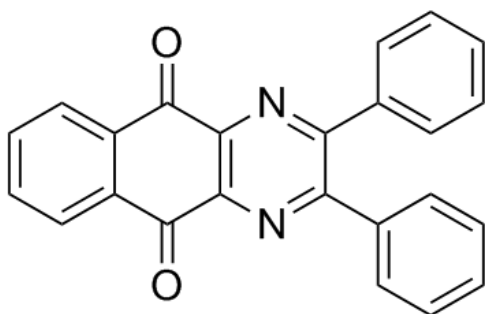
Formula $C_{24}H_{14}N_2O_2$ M.Wt 362.38

Solubility Soluble in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Protocol

Caution: Product has not been fully validated for medical applications. For research use only.

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Kinase experiment: For Western blot analysis, 2N and 4N RPE1 cells are treated with DMSO, 50 ng/mL doxorubicin, or 1 μ M DPBQ for 48 hours. Western blotting is performed with a SDS-PAGE Electrophoresis and semidry transfer. Samples are analyzed by chemiluminescence. β -actin is used as a protein loading control[1].

Cell experiment: For Apoptosis assays, 2N and 4N RPE1 cells are treated with DMSO, 60 nM staurosporine, or 1 μ M DPBQ for 48 hours. Apoptosis is evaluated by an Annexin V-PE/7-AAD apoptosis detection kit. For the flow cytometry analysis, the percent positive cells in the upper right and lower right quadrants are summed to give the total number of apoptotic cells. Three independent replicates are performed[1].

References:

[1]. Choudhary A, et al. Identification of Selective Lead Compounds for Treatment of High-Ploidy Breast Cancer. Mol Cancer Ther. 2016 Jan;15(1):48-59.

Background

DPBQ is a p53 activator.

DPBQ elicits apoptosis and cell death and is selective for effects in 4N cells. DPBQ elicits expression and phosphorylation of p53 and this effect is specific to tetraploid cells. Knockdown of TP53 restores proliferation of tetraploid cells in the presence of DPBQ[1].

[1]. Choudhary A, et al. Identification of Selective Lead Compounds for Treatment of High-Ploidy Breast Cancer. Mol Cancer Ther. 2016 Jan;15(1):48-59.

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