

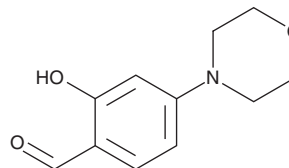
PRODUCT INFORMATION



DNA-PK Inhibitor IV

Item No. 24304

CAS Registry No.: 70362-07-1
Formal Name: 2-hydroxy-4-(4-morpholinyl)-benzaldehyde
MF: $C_{11}H_{13}NO_3$
FW: 207.2
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 215, 338 nm
Supplied as: A crystalline solid
Storage: $-20^{\circ}C$
Stability: ≥ 2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

DNA-PK inhibitor IV is supplied as a crystalline solid. A stock solution may be made by dissolving the DNA-PK inhibitor IV in the solvent of choice. DNA-PK inhibitor IV is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of DNA-PK inhibitor IV in these solvents is approximately 33 mg/ml.

DNA-PK inhibitor IV is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DNA-PK inhibitor IV should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. DNA-PK inhibitor IV has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

DNA-PK inhibitor IV is an inhibitor of DNA-dependent protein kinase (DNA-PK) with an IC_{50} value of 400 nM for the DNA-PK-dependent phosphorylation of a p53 peptide substrate.¹ It also inhibits the phosphatidylinositol 3-kinase (PI3K) isoforms p110 β , p110 δ , and p110 γ (IC_{50} s = 2.8, 5.1, and 37 nM, respectively) but not p110 α (IC_{50} = ~ 10 μM) or class II PI3Ks, PI4K β , ATM, ATR, mTOR, CK2, or GRK2 (IC_{50} s = > 50 μM).² It enhances radiation-induced cytotoxicity of HCT116 cells when used at a concentration of 100 μM .¹

References

1. Wang, F., Qiao, L., Lv, X., *et al.* Alarmin human α defensin HNP1 activates plasmacytoid dendritic cells by triggering NF- κB and IRF1 signaling pathways. *Cytokine* **83**, 53-60 (2016).
2. Park, H.I., Turk, B.E., Gerkema, F.E., *et al.* Peptide substrate specificities and protein cleavage sites of human endometase/matrix metalloproteinase-26. *J. Biol. Chem.* **277(38)**, 35168-35175 (2002).

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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