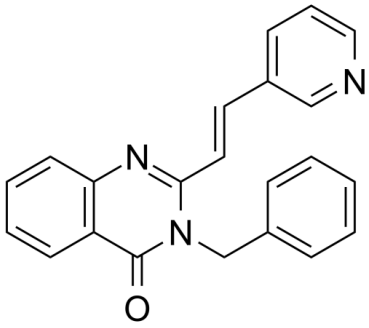
Data Sheet

Product Name:	RAD51 Inhibitor B02
Cat. No.:	CS-6351
CAS No.:	1290541-46-6
Molecular Formula:	C22H17N3O
Molecular Weight:	339.39
Target:	Apoptosis; RAD51
Pathway:	Apoptosis; Cell Cycle/DNA Damage
Solubility:	DMSO : ≥ 37 mg/mL (109.02 mM)



BIOLOGICAL ACTIVITY:

RAD51 Inhibitor B02 (B02) is an inhibitor of human **RAD51** with an **IC_{50}** of 27.4 μM. IC50 & Target: IC50: 27.4 μM (hRAD51)[1] **In Vitro:** RAD51 Inhibitor B02 specifically inhibits human RAD51 (IC_{50}=27.4 μM), but not its E. coli homologue RecA (IC_{50}>250 μM)[1]. The combination of B02 with cisplatin has the strongest killing effect on the human breast cancer cells MDA-MB-231[2]. **In Vivo:** B02 significantly enhances the therapeutic effect of cisplatin on tumor cells in vivo. B02 is tolerated by mice at doses up to 50 mg/kg without obvious body weight loss. No inhibition of tumor growth is observed on mice solely treated by B02. Mice treated with 4 mg/kg cisplatin, however, shows a 33% inhibition of tumor growth. Finally, mice treated with 50 mg/kg B02 and 4 mg/kg cisplatin shows a 66% inhibition of tumor growth[2].

PROTOCOL (Extracted from published papers and Only for reference)

Cell Assay: [2]The cells are exposed for 1 h, then the cells are ished by PBS three times and refreshed by the media containing B02 (5 μM). After 7-10 days, cells are fixed and stained with staining solution (0.05% crystal violet, 50% methanol in PBS); finally cell colonies are counted[2]. **Animal Administration:** [2]Mice: Cisplatin and B02 are dissolved in NS and cremophor/DMSO/NS (1:1:3) vehicle, respectively, immediately before injection. In a combination treatment group, the mice are injected with B02 (50 mg/kg or indicated otherwise) and cisplatin (4 mg/kg or indicated otherwise). In B02 group, mice are injected with B02 and NS; in cisplatin group, mice are injected with cisplatin and B02 vehicle. Cisplatin (or NS) is administrated 3 h after B02 (or its vehicle) injection. All the treatments are executed through I.P. injections on day 11, 13, 15 and 17 after tumor cells inoculations[2].

References:

[1]. Huang F, et al. Identification of specific inhibitors of human RAD51 recombinase using high-throughput screening. ACS Chem Biol. 2011 Jun 17;6(6):628-35.

[2]. Huang F, et al. A small molecule inhibitor of human RAD51 potentiates breast cancer cell killing by therapeutic agents in mouse xenografts. PLoS One. 2014 Jun 27;9(6):e100993.

CAIndexNames:

4(3H)-Quinazolinone, 3-(phenylmethyl)-2-[(1E)-2-(3-pyridinyl)ethenyl]-

SMILES:

O=C1N(CC2=CC=CC=C2)C(/C=C/C3=CC=CN=C3)=NC4=C1C=CC=C4

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

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