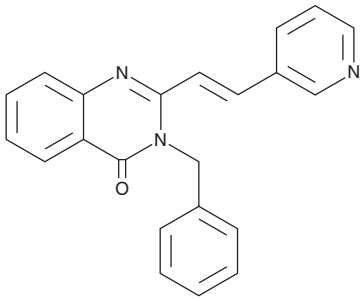
PRODUCT INFORMATION

RAD51 Inhibitor B02

Item No. 22133

CAS Registry No.:	1290541-46-6
Formal Name:	3-(phenylmethyl)-2-[(1E)-2-(3-pyridinyl) ethenyl]-4(3H)-quinazolinone
MF:	$C_{22}H_{17}N_3O$
FW:	339.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 211, 259, 328 nm
Supplied as:	A crystalline 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

RAD51 inhibitor B02 is supplied as a crystalline solid. A stock solution may be made by dissolving the RAD51 inhibitor B02 in the solvent of choice. RAD51 inhibitor B02 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of RAD51 inhibitor B02 is approximately 1 mg/ml in ethanol and approximately 10 mg/ml in DMSO and DMF.

RAD51 inhibitor B02 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, RAD51 inhibitor B02 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. RAD51 inhibitor B02 has a solubility of approximately 0.05 mg/ml in a 1:20 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

RAD51 inhibitor B02 is an inhibitor of RAD51 recombinase (IC_{50} = 27.4 µM in a FRET-based DNA strand exchange assay), which is often overexpressed in cancer cells.[1] It is selective for RAD51 over the *E. coli* homologue RecA at concentrations up to 250 µM and over RAD54 at concentrations up to 200 µM. RAD51 inhibitor B02 inhibits RAD51 binding to single-stranded DNA (ssDNA) and disrupts double-stranded DNA binding to the RAD51/ssDNA filament.[2] It inhibits irradiation-induced RAD51 foci formation in HEK293 cells at a concentration of 50 µM. RAD51 inhibitor B02 increases sensitivity to cisplatin (Item No. 13119) in mouse embryonic fibroblasts *in vitro* and in an MDA-MB-231 mouse xenograft model when used at a dose of 50 mg/kg.[3]

References

1. Huang, F., Motlekar, N.A., Burgwin, C.M., *et al.* Identification of specific inhibitors of human RAD51 recombinase using high-throughput screening. *ACS Chem. Biol.* **6(6)**, 628-635 (2011).
2. Huang, F., Mazina, O.M., Zentner, I.J., *et al.* Inhibition of homologous recombination in human cells by targeting RAD51 recombinase. *J. Med. Chem.* **55(7)**, 3011-3020 (2012).
3. Huang, F. and Mazin, A.V. A small molecule inhibitor of human RAD51 potentiates breast cancer cell killing by therapeutic agents in mouse xenografts. *PLoS One* **9(6)**, e100993 (2014).

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