# Data Sheet (Cat.No.T205499)

TargetMol

## ABCB1-IN-3

### Chemical Properties

CAS No. :

Formula: C19H16N2O

Molecular Weight: 288.34

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

| | |
|---|---|
| Description | ABCB1-IN-3 (Compound K27) is an orally active ABCB1 inhibitor that induces apoptosis. It binds directly to ABCB1, inhibiting its efflux function and maintaining stable intracellular paclitaxel (PTX) concentrations without affecting the normal expression of ABCB1. In vitro, ABCB1-IN-3 significantly increases ABCB1-mediated multidrug resistance (MDR) sensitivity to PTX, leading to cell cycle arrest and inhibition of cell proliferation. When combined with PTX, ABCB1-IN-3 demonstrates strong antitumor effects in vivo without causing toxicity. |
| Targets(IC50) | Apoptosis,P-gp |
| In vitro | ABCB1-IN-3 significantly enhances the sensitivity of MDR SW620/AD300 cells to PTX over 72 hours (IC50 = 15.33 nM) and shows minimal toxicity at concentrations up to 20 μM when used alone [1]. At concentrations of 5-20 μM for 24 hours, ABCB1-IN-3 effectively augments PTX-induced cell cycle arrest in SW620/AD300 cells, thereby inhibiting cell proliferation [1]. Over a 7-day period and at 5-20 μM, ABCB1-IN-3 in combination with PTX inhibits colony formation, showing strong reversal activity in PTX-resistant cells [1]. Additionally, ABCB1-IN-3 at 5-20 μM directly binds to ABCB1, inhibiting its efflux function, stabilizing intracellular PTX concentration without affecting ABCB1 expression [1]. |
| In vivo | ABCB1-IN-3 (50 mg/kg; administrated orally every three days for 14 days) shows significant tumor inhibition without toxicity when used in conjunction with PTX in male BALB/c nude mice implanted with SW620/AD300 cells; however, it demonstrates weak tumor suppression when used alone [1]. |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 3.4681 mL | 17.3406 mL | 34.6813 mL |
| 5 mM | 0.6936 mL | 3.4681 mL | 6.9363 mL |
| 10 mM | 0.3468 mL | 1.7341 mL | 3.4681 mL |
| 50 mM | 0.0694 mL | 0.3468 mL | 0.6936 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.



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