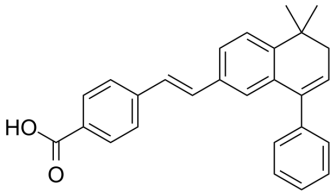
BMS453

Cat. No.:	HY-100608
CAS No.:	166977-43-1
Molecular Formula:	$C_{27}H_{24}O_2$
Molecular Weight:	380.48
Target:	RAR/RXR
Pathway:	Metabolic Enzyme/Protease
Storage:	-20°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 16.67 mg/mL (43.81 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6283 mL	13.1413 mL	26.2826 mL
	5 mM	0.5257 mL	2.6283 mL	5.2565 mL
	10 mM	0.2628 mL	1.3141 mL	2.6283 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

BMS453 (BMS-189453), a synthetic retinoid, is a RARβ agonist and a RARα/RARγ antagonist. BMS453 inhibits breast cell growth predominantly through the induction of active TGFβ[1][2].

In Vitro

BMS453 (1 μM; 11 hours; 184 and HMEC cells) treatment inhibits the proliferation of normal breast cell growth without significantly inducing apoptosis[2].
BMS453 (1 μM; 5 days; 184 and HMEC cells) treatment inhibits normal breast cell proliferation by causing G1 arrest[2].
BMS453 (1 μM; 24-72 hours; 184 cells) treatment induces Rb hypophosphorylation and decrease CDK2 kinase activity.
BMS453 increases total p21 protein levels and CDK2-bound p21 protein, but does not change CDK4-bound p21[2].
BMS453 inhibits breast cell growth predominantly through the induction of active TGFβ[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[2]

Cell Line:	Normal human mammary epithelial cells (184 and HMEC)
Concentration:	1 μM
Incubation Time:	11 hours

Result:	Inhibited ^{3}H-thymidine uptake in normal breast cells (184 and HMEC) by 40 %.

Cell Cycle Analysis[2]

Cell Line:	Normal human mammary epithelial cells (184 and HMEC)
Concentration:	1 μM
Incubation Time:	5 days
Result:	Increased the proportion of cells in G0/G1 phase and decreased the proportion of cells in S phase.

Western Blot Analysis[2]

Cell Line:	184 cells
Concentration:	1 μM
Incubation Time:	24 hours, 48 hours, 72 hours
Result:	Induced Rb hypophosphorylation and decrease CDK2 kinase activity.

CUSTOMER VALIDATION

- Anticancer Res. 2021 May;41(5):2307-2320.

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REFERENCES

[1]. J Y Chen, et al. RAR-specific agonist/antagonists which dissociate transactivation and AP1 transrepression inhibit anchorage-independent cell proliferation. EMBO J. 1995 Mar 15;14(6):1187-97.

[2]. L Yang, et al. The retinoic acid receptor antagonist, BMS453, inhibits normal breast cell growth by inducing active TGFbeta and causing cell cycle arrest. Oncogene. 2001 Nov 29;20(55):8025-35.

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