BMS493

Cat. No.: HY-108529

CAS No.: 215030-90-3

Molecular Formula: $C_{29}H_{24}O_2$

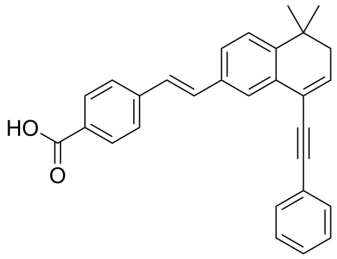
Molecular Weight: 404.5

Target: RAR/RXR

Pathway: Metabolic Enzyme/Protease; Vitamin D Related/Nuclear Receptor

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (123.61 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.4722 mL	12.3609 mL	24.7219 mL
5 mM	0.4944 mL	2.4722 mL	4.9444 mL
10 mM	0.2472 mL	1.2361 mL	2.4722 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.08 mg/mL (5.14 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.08 mg/mL (5.14 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.14 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BMS493 is an inverse pan-retinoic acid receptor (RAR) agonist. BMS493 increases nuclear corepressor interaction with RARs. BMS493 also could prevent retinoic acid-induced differentiation[1][2]. BMS493 is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAc) with molecules containing Azide groups.

In Vitro

BMS493 (100 nM; 6 days; ALDHhi UCB cells) treatment shows a twofold increase in the number of ALDHhi cells available for transplantation compared with untreated controls. Newly expanded ALDHhi cells shows increased numbers of CD34 and

CD133-positive cells, as well as a reduction in CD38 expression, a marker of hematopoietic cell differentiation[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	ALDHhi UCB cells
Concentration:	100 nM
Incubation Time:	6 days
Result:	Showed a twofold increase in the number of ALDHhi cells available for transplantation compared with untreated controls.

In Vivo

Intrapancreatic transplantation of cell progeny after expansion of ALDHhi cells with or without BMS493 shows no reduction of hyperglycemia in Streptozotocin-treated NOD/SCID mice. Thus, Umbilical cord blood (UCB)-derived ALDHhi cells effectively lost islet regenerative capacity during ex vivo expansion[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Death Dis. 2022 Sep 29;13(9):838.

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REFERENCES

[1]. Elgamal RM, et al. BMS 493 Modulates Retinoic Acid-Induced Differentiation During Expansion of Human Hematopoietic Progenitor Cells for Islet Regeneration. Stem Cells Dev. 2018 Aug 1;27(15):1062-1075.

[2]. Yu Z, et al. Apoptosis induced by atRA in MEPM cells is mediated through activation of caspase and RAR. Toxicol Sci. 2006 Feb;89(2):504-9.

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