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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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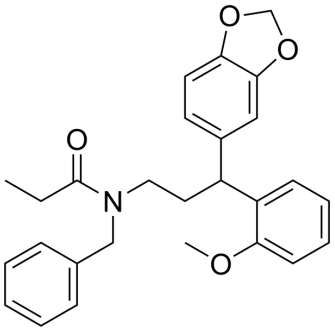
AGX51

Cat. No.:	HY-129241
CAS No.:	330834-54-3
Molecular Formula:	$C_{27}H_{29}NO_4$
Molecular Weight:	431.52
Target:	Others
Pathway:	Others
Storage:	Pure form -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (231.74 mM; Need ultrasonic)
Ethanol : 100 mg/mL (231.74 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3174 mL	11.5869 mL	23.1739 mL
	5 mM	0.4635 mL	2.3174 mL	4.6348 mL
	10 mM	0.2317 mL	1.1587 mL	2.3174 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 (4.82 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.08 mg/mL (4.82 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.82 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

AGX51 is a first-in-class pan-Id (inhibitors of DNA-binding/differentiation proteins) antagonist and degrader. AGX51 inhibits the Id1-E47 interaction, leading to ubiquitin-mediated degradation of Ids, cell growth arrest, and reduces viability. AGX51 inhibits the TNBC cell lines with IC_{50}s of nearly 25 μM. AGX51 can be used for the research of cancer[1].

IC_{50} & Target

IC50: 26.66 μM (4T1), 8.7 μM (HMLE RAS Twist), 22.28 μM (MDA-MB-157), 30.91 μM (MDA-MB-436), 36.55 μM (SK-BR-3), 60 μM (MCF-7), 10.89 μM (PDX-BR7), 11.97 μM (PDX-IBT) , 18.56 μM (PDX-BR11)[1]

In Vitro

AGX51 (0-80 μM; 24 h) decreases ID1 protein levels in 4T1 cells[1].
AGX51 (40 μM; 0-72 h) decreases ID1 levels protein with a 40 μM concentratio in 4T1 cells[1].
AGX51 (40 μM; 24 h) influences 4T1 cells , ER+, HER2+, TNBC and three breast cancer PDX cell ines[1].
AGX51 (0-80 μM; 24-48 h) influences cell cycle of 4T1 cells[1].
AGX51 (40 μM; 4-24 h) influences phospho-histone H3 levels in 4T1 cells[1].
AGX51 (40 μM; 24 h) influences ROS levels in 4T1 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	4T1 cells
Concentration:	0, 5, 10, 20, 40 and 80 μM
Incubation Time:	24 hours
Result:	Decreased ID1 protein levels starting at a concentration of 40 μM in 4T1 cells.

Western Blot Analysis[1]

Cell Line:	4T1 cells
Concentration:	40 μM
Incubation Time:	0, 2, 4, 8 , 12, 24, 48 and 72 hours
Result:	Decreased ID1 protein levels starting at 4 h, while until 24 h ID1 protein completely loss.

Cell Viability Assay[1]

Cell Line:	4T1 cells, HMLE RAS Twist, MDA-MB-157, MDA-MB-436, MDA-MB-231, MDA-MB-453, BT-474, MDA-MB-361, SK-BR-3, MCF-7, T47-D, PDX-BR7, PDX-IBT and PDX-BR11
Concentration:	40 μM
Incubation Time:	24 hours
Result:	Inhibited 4T1, HMLE RAS Twist, MDA-MB-157, MDA-MB-436, SK-BR-3, MCF-7, PDX-BR7, PDX-IBT and PDX-BR11 cell lines with IC_{50}s of 26.66, 8.7, 22.28, 30.91, 36.55, 60, 10.89, 11.97 and 18.56 μM, respectively.

Cell Cycle Analysis[1]

Cell Line:	4T1 cells
Concentration:	40 μM
Incubation Time:	24 and 48 hours
Result:	Affected cell cycle of 4T1 cells with a G0/G1 phase accumulation.

Cell Viability Assay[1]

Cell Line:	4T1 cells
Concentration:	40 μM
Incubation Time:	4 and 24 hours
Result:	Reduced phospho-histone H3 levels in 4T1 cells.

Cell Viability Assay[1]

Cell Line:	4T1 cells
Concentration:	40 μM
Incubation Time:	24 hours
Result:	Increased ROS level of 4T1 cells and indicated ROS production is a main mechanism of cell killing.

In Vivo

AGX51 (50 mg/kg; i.p. twice a day for 4 weeks) inhibits lung metastasis[1].
AGX51 (15 mg/kg; i.p. twice a day for 3 weeks) exibits anti-tumor activity with autochronous cancer[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Balb/c mice with luciferase-labeled 4T1 cells[1]
Dosage:	50 mg/kg
Administration:	Intraperitoneal injection; 60 mg/kg twice a day; for 4 weeks
Result:	Inhibited lung metastasis development.

Animal Model:	A/J mice with AOM colon tumor model[1]
Dosage:	15 mg/kg
Administration:	Intraperitoneal injection; 15 mg/kg twice a day; for 3 weeks
Result:	Dreased the colon tumors and exhibited anti-tumor activity in AOM colon tumor mice.

CUSTOMER VALIDATION

- Front Cell Dev Biol. 2021 Feb 12.
- bioRxiv. 2023 Oct 4.
- Leiden Uiversity. 9 (2021): 182.

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REFERENCES

[1]. Wojnarowicz PM, et al. Anti-tumor effects of an ID antagonist with no observed acquired resistance. NPJ Breast Cancer. 2021 May 24;7(1):58.

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