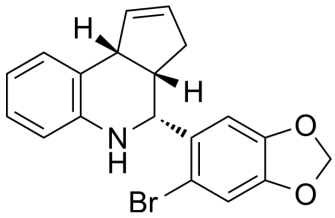
G15

Cat. No.:	HY-103449
CAS No.:	1161002-05-6
Molecular Formula:	$C_{19}H_{16}BrNO_2$
Molecular Weight:	370.24
Target:	Estrogen Receptor/ERR
Pathway:	Vitamin D Related/Nuclear Receptor
Storage:	-20°C, protect from light * In solvent : -80°C, 2 years; -20°C, 1 year (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 41.67 mg/mL (112.55 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7010 mL	13.5048 mL	27.0095 mL
	5 mM	0.5402 mL	2.7010 mL	5.4019 mL
	10 mM	0.2701 mL	1.3505 mL	2.7010 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 (5.62 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.62 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

G15 is a high affinity and selective G-protein-coupled estrogen receptor (GPER/GPR30) antagonist with a K_i of 20 nM[1][2].

IC_{50} & Target

Ki: 20 nM (GPER/GPR30)[2]

In Vitro

G15 (0.1-10 μM; 2 days) inhibits GPER-mediated proliferation stimulated by 17β-estradiol (E2) in A549 and H1793 cell lines[1].
G15 (1 μM; 48 hours) inhibits the response of GPER stimulated by E2 and G1 in A549 and H1793 cell lines[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	A549, H1793 cell lines

Concentration:	0.1, 1, 10 μM (combination with 10 nM E2)
Incubation Time:	2 days
Result:	Inhibited GPER-mediated proliferation stimulated by E2.

Western Blot Analysis[1]

Cell Line:	A549, H1793 cell lines
Concentration:	1 μM (combination with 10 nM E2 and 10 nM G1)
Incubation Time:	48 hours
Result:	Inhibited the response of GPER stimulated by E2 and G1.

In Vivo

G15 (1.46 mg/kg; i.h.; twice a week for 14 weeks) decreases the number of tumor nodules and tumor index increased by the E2 or G1 group in urethane-induced adenocarcinoma mice[1].

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

Animal Model:	Four-week-old female Kunming mice (Urethane-induced adenocarcinoma)[1]
Dosage:	1.46 mg/kg (combination with E2, 0.09 mg/kg and fulvestrant (Ful), 2.4 mg/kg)
Administration:	Subcutaneous injection; twice a week for 14 weeks
Result:	The number of tumor nodules decreased in the E2+Ful+G15 group.

CUSTOMER VALIDATION

- J Hazard Mater. 2024 Jun 13:475:134855.
- Environ Int. 6 October 2022, 107568.
- Sci Total Environ. 2024 Apr 26:172782.
- Cell Death Dis. 2022 Apr 19;13(4):372.
- Environ Pollut. 2023 Jul 14;122211.

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REFERENCES

[1]. Liu C, et al. G-Protein-Coupled Estrogen Receptor Antagonist G15 Decreases Estrogen-Induced Development of Non-Small Cell Lung Cancer. Oncol Res. 2019 Feb 21;27(3):283-292

[2]. Girgert R, et al. Estrogen Signaling in ERα-Negative Breast Cancer: ERβ and GPER. Front Endocrinol (Lausanne). 2019 Jan 9;9:781.

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