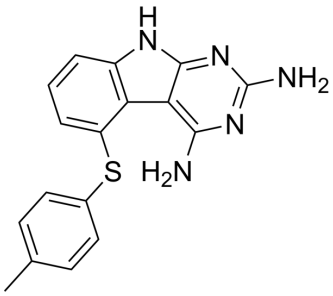
AG311

Cat. No.:	HY-116107
CAS No.:	1126602-42-3
Molecular Formula:	$C_{17}H_{15}N_5S$
Molecular Weight:	321.4
Target:	Necroptosis
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

AG311 is an anticancer and antimetastatic agent. AG311 induces rapid necrosis in numerous cancer cell lines[1].

In Vitro

AG311 (0-30 μM; 48 h) shows cytotoxicity against cancer cells[1].
AG311 (10-40 μM; 0-150 min) selectively induces membrane permeabilization in breast cancer cells (compared to HUVECs)[1].
AG311 (25 μM; 20 min) induces necrosis and lacks molecular markers of apoptosis in MDA-MB-435 cells[1].
AG311 (15-25 μM) affects calcium homeostasis and induces plasma membrane depolarization in MDA-MB-435 cells[1].
AG311 (5-20 μM) induces rapid mitochondrial membrane changes and mitochondrial dysfunction in MDA-MB-435 cells[1].
AG311 (0-14 μM; 30 h) inhibits breast cancer cell migration[1].

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

Cell Viability Assay[1]

Cell Line:	MDA-MB-435, MDA-MB-468, MDA-MB-231, MCF7, PANC-1, A375, U251, SH-SY5Y, A431, B16F10, COLO-205, DU145, HUVEC and HDF
Concentration:	
Incubation Time:	48 h
Result:	The IC_{50} value for MDA-MB-435 (BLBC) was 13.9 μM. In other breastcancer cell lines, had similar (MDA-MB-468 and MCF7) or lower (MDA-MB-231) IC_{50} values compared with MDAMB-435. was least potent on noncancerous human dermal fibroblasts HDF (IC_{50} 29.3 μM), suggesting a level of selectivity.

Cell Migration Assay [1]

Cell Line:	4T1-luc2-GFP TNBC cells
Concentration:	0, 8, 10, 12, 14 μM
Incubation Time:	30 h
Result:	Significantly inhibited cell migration at multiple subtoxic doses in 4T1-luc2-GFP cells.

In Vivo

AG311 (23 mM; intratumoral; once daily for 2 days) increases necrosis in mice[1].

AG311 (45 mg/kg; i.p.; twice weekly for 30 days) inhibits tumor growth and lung metastases in mice[1].

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

Animal Model:	BALB/cJ mice, 4T1 Triple Negative Orthotopic Allograft[1]
Dosage:	23 mM, 1/15 of tumor volume
Administration:	Intratumoral injection, once daily for 2 days
Result:	Injected tumors had a significantly higher percentage of necrosis compared with their control-treated counterparts.

Animal Model:	7-week-old female NCr nu/nu athymic mice, MDA-MB-435 Orthotopic Xenograft[1]
Dosage:	45 mg/kg
Administration:	Intraperitoneal injection, twice weekly for 30 days
Result:	Significantly reduced primary tumor growth. Animals had fewer lung metastases at the end of the experiment compared with control-treated animals.

REFERENCES

[1]. Bastian A, et al. A small molecule with anticancer and antimetastatic activities induces rapid mitochondrial-associated necrosis in breast cancer. J Pharmacol Exp Ther. 2015 May;353(2):392-404.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA