AhR modulator-1

Cat. No.: HY-135671

CAS No.: 115039-00-4

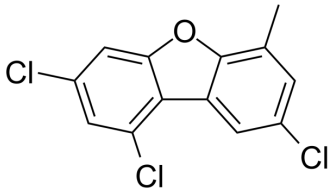
Molecular Formula: $C_{13}H_7Cl_3O$

Molecular Weight: 285.55

Target: Aryl Hydrocarbon Receptor; VEGFR; Estrogen Receptor/ERR

Pathway: Immunology/Inflammation; Protein Tyrosine Kinase/RTK; Others

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

AhR modulator-1 (compound 6-MCDF) is a selective and orally active aryl hydrocarbon receptor (AhR) modulator. AhR modulator-1 inhibits metastasis, in part, by inhibiting prostatic VEGF production prior to tumor formation. AhR modulator-1 also possess anti-estrogenic properties in rat uterus[1].

IC_{50} & Target

Aryl hydrocarbon receptor (AhR) [1][2]
Prostatic VEGF[1]
Estrogenic[1]

In Vitro

AhR modulator-1 (6-MCDF; 0.1-10 μM; 48-96 hours; ASPC-1 cells) treatment exhibits dose-dependent growth inhibitory effects with growth inhibitory effects of 26, 43 and 99% at concentrations of 0.1, 1 and 10 μM, respectively[2].

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

Cell Proliferation Assay[2]

Cell Line:	ASPC-1 cells
Concentration:	0.1 μM, 1 μM and 10 μM
Incubation Time:	48 hours, 72 hours, 96 hours
Result:	Exhibited dose-dependent growth inhibitory effects.

In Vivo

AhR modulator-1 (6-MCDF; 0-40 mg/kg; oral administration; daily; for 12 weeks; C57BL/6-Tg(TRAMP)8247Ng/J mice) treatment reduces the frequency of pelvic lymph node metastasis in mice fed the 40 mg/kg diet. And serum VEGF concentrations are also reduced. Prostate tumor incidence and size are not significantly reduced[1].

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

Animal Model:	C57BL/6-Tg(TRAMP)8247Ng/J (TRAMP) mice (8-week-old)[1]
Dosage:	0 mg/kg, 10 mg/kg, 40 mg/kg
Administration:	Oral administration; daily; for 12 weeks
Result:	The frequency of pelvic lymph node metastasis was reduced 5-fold in mice fed the 40 mg

	/kg diet.S erum VEGF concentrations were also reduced.

REFERENCES

[1]. Fritz WA, et al. The selective aryl hydrocarbon receptor modulator 6-methyl-1,3,8-trichlorodibenzofuran inhibits prostate tumor metastasis in TRAMP mice. Biochem Pharmacol. 2009 Apr 1;77(7):1151-60.

[2]. Koliopanos A, et al. Increased arylhydrocarbon receptor expression offers a potential therapeutic target for pancreatic cancer. Oncogene. 2002 Sep 5;21(39):6059-70.

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