1,4-Chrysenequinone

Cat. No.: HY-111441

CAS No.: 100900-16-1

Molecular Formula: $C_{18}H_{10}O_2$

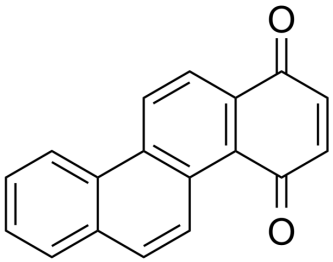
Molecular Weight: 258.27

Target: Aryl Hydrocarbon Receptor

Pathway: Immunology/Inflammation

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 3.33 mg/mL (12.89 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.8719 mL	19.3596 mL	38.7192 mL
5 mM	0.7744 mL	3.8719 mL	7.7438 mL
10 mM	0.3872 mL	1.9360 mL	3.8719 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: 0.5 mg/mL (1.94 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

1,4-Chrysenequinone, a polycyclic aromatic quinone, acts as an activator of aryl hydrocarbon receptor (AhR).

IC_{50} & Target

AhR[1]

In Vitro

1,4-Chrysenequinone shows significant AhR ligand activity, with EC_{TCDD25}s (concentration equivalent with 25% of TCDD max) of 9.7 nM and 1.9 μM in yeast and mouse hepatoma cell systems, respectively[1].

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

PROTOCOL

Cell Assay [1]	Mouse hepatoma (H1L1.1c2) cells (1.5×10^5 cells/well) are cultured in 96-well culture plates, and samples (1,4-Chrysenequinone) dissolved in dimethyl sulfoxide are added to the medium to achieve a final solvent concentration of 1%. After the plates are incubated at 37°C in 5% CO_2 for 24 h, the cell viability is confirmed under a microscope. Subsequently, the medium is removed, and the cells are lysed. Adding luciferin as the substrate, the luciferase activity is determined under a luminometer and reported as relative light units. The concentrations producing luciferase activity equal to 25% of the maximal response to TCDD are calculated and also referred to as the ECTCDD25. The ratios of the ECTCDD25 of B[a]P to the ECTCDD25 of each of the compounds are calculated and referred to as IEFs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Misaki K, et al. Aryl hydrocarbon receptor ligand activity of polycyclic aromatic ketones and polycyclic aromatic quinones. Environ Toxicol Chem. 2007 Jul;26(7):1370-9.

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