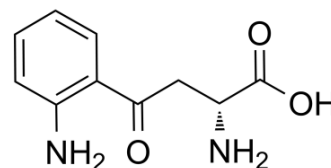


D-Kynurenine

Cat. No.:	HY-W014502		
CAS No.:	13441-51-5		
Molecular Formula:	C ₁₀ H ₁₂ N ₂ O ₃		
Molecular Weight:	208.21		
Target:	Aryl Hydrocarbon Receptor; Endogenous Metabolite		
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H₂O : 62.5 mg/mL (300.18 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	4.8028 mL	24.0142 mL	48.0284 mL
	5 mM	0.9606 mL	4.8028 mL	9.6057 mL
	10 mM	0.4803 mL	2.4014 mL	4.8028 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

D-kynurenine, a metabolite of D-tryptophan, can serve as the bioprecursor of kynurenic acid (KYNA) and 3-hydroxykynurenine. D-Kynurenine is an agonist for G protein-coupled receptor, GPR109B. D-Kynurenine is a substrate in a fluorometric assay of D-amino acid oxidase. D-kynurenine promotes epithelial-to-mesenchymal transition via activating aryl hydrocarbon receptor (AHR)^{[1][2][3][4]}.

IC₅₀ & Target

Human Endogenous Metabolite

In Vitro

D-kynurenine (10, 40, 60, and 100 μM) positively regulates the metastasis of 95D cells, a lung cancer cell line, which is reduced upon siRNAAhr treatment. Significant enhancement VIM expression was detected in the presence of D-kynurenine (10 and 40 μM). 10 μM D-kynurenine markedly attenuates E-cadherin level. 10 μM D-kynurenine-mediated changes of VIM and E-cadherin are substantially attenuated on siRNAAhr treatment as well. The evidences-10/40 μM D-kynurenine-induced up-regulation of CYP1A1, 10 μM D-kynurenine-induced increase of nuclear transfer of Ahr, and 10/40/60/100 μM D-kynurenine-induced enhancement of DER-luciferase activity-indicated that D-kynurenine is capable of activating Ahr in fact [4].

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

REFERENCES

- [1]. Wang XD, et al. A method for the determination of D-kynurenine in biological tissues. *Anal Bioanal Chem.* 2013 Dec;405(30):9747-54.
- [2]. Irukayama-Tomobe Y, et al. Aromatic D-amino acids act as chemoattractant factors for human leukocytes through a G protein-coupled receptor, GPR109B. *Proc Natl Acad Sci U S A.* 2009 Mar 10;106(10):3930-4.
- [3]. Kozaki A, et al. Fluorimetric assay for D-amino acid oxidase activity in rat brain homogenate by using D-kynurenine as a substrate. *Biosci Trends.* 2012 Oct;6(5):241-7.
- [4]. Duan Z, et al. Promoting epithelial-to-mesenchymal transition by D-kynurenine via activating aryl hydrocarbon receptor. *Mol Cell Biochem.* 2018 Nov;448(1-2):165-173.
-

Caution: Product has not been fully validated for medical applications. For research use only.

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