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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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1-Benzylimidazole

Cat. No.: HY-W042985

CAS No.: 4238-71-5

Molecular Formula: $C_{10}H_{10}N_2$

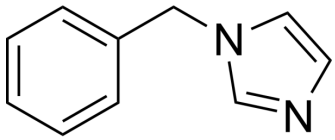
Molecular Weight: 158.2

Target: Biochemical Assay Reagents

Pathway: Others

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (632.11 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	6.3211 mL	31.6056 mL	63.2111 mL
	5 mM	1.2642 mL	6.3211 mL	12.6422 mL
	10 mM	0.6321 mL	3.1606 mL	6.3211 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: ≥ 2.5 mg/mL (15.80 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

1-Benzyl-1H-imidazole is a biochemical reagent that can be used as a biological material or organic compound for life science related research.

In Vitro

Benzylimidazole is a selective inhibitor of thromboxane synthase and a stimulator of UDP-glucuronosyltransferase. Thromboxane synthase is a cytochrome P450 enzyme. The cytochrome P450 proteins have been involved in catalyzing many reactions invol ved in drug metabolism and synthesis of cholesterol, steroids , and other lipids. The enzyme plays an important role in several pathophysiological processes including hemostasis, cardiovascular disease, and stroke. The gene expresses two transcript variants. 1-Benzylimidazole selectively inhibited the activity of thrombus Boxane synthase. 1-Benzylimidazole reduced TXB2 levels and increased blood flow in ischemia-reperfusion injury of rat brain. In male Wistar rats, gastrically administration of 1-benzylimidazole (25, 75 and 100 mg/kg/day) caused a dose-dependent hepatitis. 1-Benzylimidazole decreased the plasma level in triglycerides by 60–70%. 1-benzylimidazole stimulated three distinct forms of UDP-glucuronosyltransferase. 1-benzylimidazole significantly increased the activities towards 4-methylumbelliierone, 1-

	naphthol, morphine or a monoterpenoid alcohol, nopol. Benzylimidazole increased hepatocellular CYP1A catalytic activity and CYP1A mRNA in a concentration-dependent way. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

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[3]. Shen RF, Tai H H. Thromboxanes: synthase and receptors[J]. Journal of biomedical science, 1998, 5(3): 153-17

[4]. Navas JM, Chana A, Herradón B, et al. Induction of CYP1A by the N-imidazole derivative, 1-benzylimidazole[J]. Environmental toxicity and chemistry, 2003, 22(4): 830-83

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