Carbazochrome sodium sulfonate

Cat. No.: HY-B0491A

CAS No.: 51460-26-5

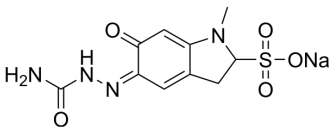
Molecular Formula: $C_{10}H_{11}N_4NaO_5S$

Molecular Weight: 322.27

Target: Adrenergic Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 49 mg/mL (152.05 mM)

H_2O : 6.67 mg/mL (20.70 mM; ultrasonic and warming and heat to 60°C)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.1030 mL	15.5149 mL	31.0299 mL
5 mM	0.6206 mL	3.1030 mL	6.2060 mL
10 mM	0.3103 mL	1.5515 mL	3.1030 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 (7.76 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.76 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (7.76 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Carbazochrome sodium sulfonate (AC-17) is a capillary stabiliser and used for the research of haemorrhage. Carbazochrome sodium sulfonate is an antihemorrhagic agent[1].

In Vitro

Carbazochrome (0.1-10 μM) inhibits the Bradykinin induced and thrombin-induced formation of [^{3}H]IP3 in a concentration-dependent manner[1].Carbazochrome (0.1-1 μM), when included from 30 min before stimulation, significantly suppressed the enhancement of permeability induced by vasoactive substances[1].

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

In Vivo

Carbazochrome inhibits the severe pulmonary dysfunction induced by the intravenous injection of radiographic contrast media. Carbazochrome (1-10 mg/kg, i.v.) attenuates pulmonary dysfunction induced by a radiographic contrast medium in rats[2].

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

Animal Model:	Male Sprague-Dawley rats weighing 180-230 g[2]
Dosage:	1, 5 and 10 mg/kg
Administration:	I.v.; injected 30, 60, or 90 min before Ioxaglate injection (4 g I/kg, i.v.).
Result:	Attenuated the Ioxaglate-increased vascular permeability at the dose of 1, 5 and 10 mg/kg in a dose-dependent manner, achieving statistical significance at 5 and 10 mg/kg.

REFERENCES

[1]. Toshiaki Sendo, et al. Carbazochrome sodium sulfonate (AC-17) reverses endothelial barrier dysfunction through inhibition of phosphatidylinositol hydrolysis in cultured porcine endothelial cells. Naunyn Schmiedebergs Arch Pharmacol. 2003 Sep;368(3):175-80.

[2]. Toshiaki Sendo, et al. Carbazochrome attenuates pulmonary dysfunction induced by a radiographic contrast medium in rats. Eur J Pharmacol. 2002 Aug 23;450(2):203-8.

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