Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

20-HETE

Catalog No: tcsc1451

Available Sizes

Size: 2mg

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
79551-86-3

Formula:
$C_{20}H_{32}O_3$

Pathway:
Membrane Transporter/Ion Channel

Target:
Potassium Channel

Purity / Grade:
>98%

Solubility:
DMSO: ≥ 3.2 mg/mL

Alternative Names:
20-hydroxy Arachidonic Acid

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Observed Molecular Weight:
320.47

Product Description

20-HETE(20-hydroxy Arachidonic Acid) is a potent vasoconstrictor produced in vascular smooth muscle (VSM) cells. It depolarizes VSM by blocking the open-state probability of Ca2+-activated K+-channels.

IC50 Value:

Target:

20-Hydroxyeicosatetraenoic acid (20-HETE) is a cytochrome P450-derived arachidonic acid metabolite that has been shown to increase smooth muscle contractions and proliferation, stimulate endothelial dysfunction and activation and promote hypertension.

in vitro: Addition of 20-HETE to the bath (1-100 nM), reduced the frequency of opening of the large-conductance Ca(2+)-activated K+ channel recorded using cell-attached patches on VSM [1]. In kidney, 20-HETE induces diuresis by inhibiting Na+-K+-ATPase in proximal tubules and Na+/K+/Cl+ cotransporter in the thick ascending limb of Henle\'s loop [2].

in vivo: In Cyp4a14(-/-) mice, which display androgen-driven and 20-HETE-dependent hypertension, treatment with20-HETE antagonist abolished remodeling of renal resistance arteries measured as media thickness (24±1 vs. 15±1μm) and M/L (0.29±0.03 vs. 0.17±0.01) [4]. The transgenic mice had overexpressed hepatic CYP4F2, high hepatic 20-HETE and fasting plasma glucose levels but normal insulin level. The GP activity was increased and the cAMP/PKA-PhK-GP pathway was activated in the transgenic mice compared with wild-type mice [5].

Clinical trial: Mechanisms of Response to Diesel Exhaust in Subjects With Asthma. Phase not specified