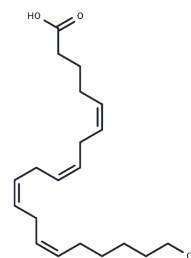


## 20-HETE

## Chemical Properties

CAS No. :	79551-86-3
Formula:	C <sub>20</sub> H <sub>32</sub> O <sub>3</sub>
Molecular Weight:	320.47
Storage:	Store at low temperature Pure form: -20°C for 3 years   In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	20-HETE belongs to endogenous metabolites (natural products) and is a protein kinase C (PKC) pathway activator that promotes ACSL4 ubiquitination and degradation through upregulation of FBXO10, possessing regulatory properties on cell proliferation and migration. This compound is used in research related to prostate tumors and cardiac hypertrophy.
Targets(IC50)	PKC
In vitro	<b>Methods:</b> Treatment with 17-ODYA (1 $\mu$ M) was used to observe large-conductance Ca <sup>2+</sup> -activated K <sup>+</sup> channel activity, with reversal by 20-HETE (10 nM); isolated perfused small renal arteries from rats were treated with 20-HETE (1-1000 nM), and the vasoconstrictor response was blocked with TEA (1 mM). <b>Results:</b> 17-ODYA increased channel activity, which was reversed by 20-HETE; 20-HETE dose-dependently reduced arterial diameter by approximately 15%, and this constrictor response was blocked by TEA. [1]
In vivo	<b>Methods:</b> Male Sprague-Dawley rats received intraperitoneal injections of DHT (56 mg/kg/day, dissolved in 20% benzyl benzoate corn oil) for 21 consecutive days to induce hypertension, with concurrent administration of reserpine (100 $\mu$ g/kg/day, dissolved in DMSO) or combined administration of 20-HEDGE (10 mg/kg/day, dissolved in 5% ethanol saline). <b>Results:</b> Reserpine completely prevented DHT-induced elevation of blood pressure, but did not affect the increases in medial thickness, media/lumen ratio, and collagen IV deposition in renal interlobular arteries; whereas combined administration of 20-HEDGE significantly inhibited these parameters, confirming that 20-HETE directly mediates DHT-induced microvascular remodeling independent of elevated blood pressure.[2]

## Solubility Information

Solubility	DMSO: 2 mg/mL (6.24 mM),Sonication is recommended. Ethanol: 5 mg/mL (15.6 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	--

### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1204 mL	15.6021 mL	31.2042 mL
5 mM	0.6241 mL	3.1204 mL	6.2408 mL
10 mM	0.312 mL	1.5602 mL	3.1204 mL
50 mM	0.0624 mL	0.312 mL	0.6241 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

- Zou AP, et al. 20-HETE is an endogenous inhibitor of the large-conductance Ca(2+)-activated K+ channel in renal arterioles. *Am J Physiol*. 1996 Jan;270(1 Pt 2):R228-37.
- Li B, Ma Y, Tan L, et al. 20-Hydroxytetraenoic acid induces hepatic fibrosis via the TGF- $\beta$ 1/Smad3 signaling pathway. *Toxicology Letters*. 2022
- Ding Y, et al. 20-HETE induces remodeling of renal resistance arteries independent of blood pressure elevation in hypertension. *Am J Physiol Renal Physiol*. 2013 Sep 1;305(5):F753-63.
- Lai G, et al. 20-HETE induces hyperglycemia through the cAMP/PKA-PhK-GP pathway. *Mol Endocrinol*. 2012 Nov;26(11):1907-16.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481