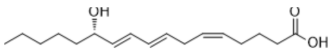
12S-HHT

Cat. No.:	HY-113330
CAS No.:	54397-84-1
Molecular Formula:	$C_{17}H_{28}O_3$
Molecular Weight:	280.4
Target:	Leukotriene Receptor; Endogenous Metabolite
Pathway:	GPCR/G Protein; Metabolic Enzyme/Protease
Storage:	Solution, -20°C, 2 years



BIOLOGICAL ACTIVITY

Description

12S-HHT (12(S)-HHTrE) is an enzymatic product of prostaglandin H_2 (PGH_2) derived from cyclooxygenase (COX)-mediated arachidonic acid metabolism. 12S-HHT is an endogenous ligand for BLT2 that fully activates BLT2 in vivo. 12S-HHT suppresses UV-induced IL-6 synthesis in keratinocytes, exerting an anti-inflammatory activity[1][2].

IC_{50} & Target	Human Endogenous Metabolite	BLT2

In Vitro

12S-HHT (0-150 nM; 3 hours) has anti-inflammatory activity by attenuating the UVB-induced IL-6 synthesis in HaCaT cells[2].
12S-HHT inhibits the UVB-stimulated p38 MAPK/NF-κB pathway by up-regulating MKP-1, which leads to the suppression of IL-6 synthesis[2].
12S-HHT is an endogenous agonist for BLT2[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[2]

Cell Line:	HaCaT cells
Concentration:	0, 12.5, 25, 75 or 150 nM
Incubation Time:	3 hours
Result:	UVB (5 mJ/cm2) irradiation markedly up-regulated IL-6 synthesis and release, which was suppressed by the treatment with 12-HHT in a concentration-dependent manner.

CUSTOMER VALIDATION

- Cell Rep Med. 2023 May 24;101061.

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REFERENCES

[1]. Saeki K, et al. Identification, signaling, and functions of LTB4 receptors. Semin Immunol. 2017;33:30-36.

[2]. Lee JW, et al. 12(S)-Hydroxyheptadeca-5Z,8E,10E-trienoic acid suppresses UV-induced IL-6 synthesis in keratinocytes, exerting an anti-inflammatory activity. Exp Mol Med. 2012;44(6):378-386.

[3]. Okuno T, et al. Metabolism and biological functions of 12(S)-hydroxyheptadeca-5Z,8E,10E-trienoic acid. Prostaglandins Other Lipid Mediat. 2021;152:106502.

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