Proteins

12,13-DiHOME

Cat. No.: HY-116003 CAS No.: 263399-35-5 Molecular Formula: $C_{18}H_{34}O_{4}$ Molecular Weight: 314.46

Target: **Endogenous Metabolite** Pathway: Metabolic Enzyme/Protease Storage: Solution, -20°C, 2 years

Product Data Sheet

BIOLOGICAL ACTIVITY

Des		

12,13-DiHOME is a stimulator of Brown adipose tissue (BAT), as well as a thermogenic lipokine that activates BAT in response to cold. (±)12,13-DiHOME activates BAT fuel uptake and enhances cold tolerance, via promoting the translocation of the FA transporters FATP1 and CD36 to the cell membrane. (±)12,13-DiHOME can be used for research of metabolic disorders^[1].

In Vivo

 $12,13- DiHOME\ (1\ \mu g/kg; retro-orbitally\ injection; once\ daily\ for\ 2\ weeks)\ acutely\ decreases\ levels\ of\ serum\ triglycerides\ in$ mice with high-fat diet model, and increases BAT uptake to defend cold^[1].

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

Animal Model:	Mice fed a high-fat ${\sf diet}^{[1]}$
Dosage:	1 μg/kg
Administration:	Retro-orbitally injection; once daily for 2 weeks
Result:	Displayed no effects on body weight, glucose tolerance or circulating nonesterified FA. Increased BAT-specific lipid uptake and improved oral lipid tolerance. Increased radiolabeled FA uptake (Fig. 3f) and glucose uptake.
Animal Model:	To explore the biosynthesis of (±)12, 13-dihome in mice in vivo ^[1]
Dosage:	
Administration:	7-d cold challenge in mice: mice treated with norepine phrine (NE) for 30 min and exposed to 4°C-cold for 1 h
Result:	Result: Increased in the circulation of male mice exposed to cold, but not female mice. And also, the enzymes producing 12,13-diHOME were uniquely induced in BAT by cold stimulation.

REFERENCES

l]. Lynes MD, et al. The cold-in	nduced lipokine 12,13	3-diHOME pror	motes fatty acid t	ransport into b	rown adipose tiss	ue. Nat Med. 2017	May;23(5):631-637	,
						or research use		
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