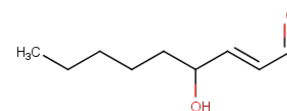


Catalog Number: CM11564

产品信息

Catalog Number:
CM11564CAS号:
75899-68-2分子式:
C₉H₁₆O₂主要靶点:
Endogenous
Metabolite|Dehydrogenase主要通路:
代谢分子量:
156.22溶解度:
DMSO:249 mg/mL(1593.91 mM)

体外活性

4-Hydroxynonenal is both a substrate and an inhibitor of ALDH2; inhibition of ALDH2 by 4-Hydroxynonenal is reversible at low concentration and becomes irreversible when the concentration of 4-HNE reaches 10 μ M. 4-Hydroxynonenal can induce antioxidant defense mechanisms to restrain its own production and to enhance cellular protection against oxidative stress. 4-Hydroxynonenal, the product of lipid peroxidation, is mutagenic and genotoxic in viruses, bacteria, and mammalian cells. It reacts with all four DNA bases but with different efficiency: G > C > A > T. 4-Hydroxynonenal-dG represents the best biomarker of the genotoxic effects of 4-Hydroxynonenal and these adducts are primarily found in nuclear DNA [1].

体内活性

Following 24 h after fluid percussion injury (FPI), the mouse brain tissue is analyzed for the expression level of NADPH oxidase 1 (NOX1), inducible nitric oxide synthase (iNOS), 4-Hydroxynonenal (4-HNE). Both wild-type (Nrf2+/+) and Nrf2-deficient mice (Nrf2-/-) results in increased expression of 4-Hydroxynonenal following 15 psi injury (moderate injury) when compared to uninjured Nrf2+/+ and Nrf2-/- mice. Similar to the iNOS result, in Nrf2-/- KO mice, the expression level of 4-Hydroxynonenal is significantly high when compared to corresponding injured and uninjured Nrf2+/+ WT animals [2].

描述

4-Hydroxynonenal (4-HNE) is an oxidative/nitrosative stress biomarker. It is a substrate and an inhibitor of acetaldehyde dehydrogenase 2 (ALDH2).

储存

Powder: -20°C for 3 years | In solvent: -80°C for 2 years