

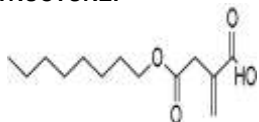
PRODUCT: 4-Octyl itaconate

ALTERNATE NAME: 2-methylene-butanedioic acid, 4-octyl ester

CATALOG #: B2171-10, 50

AMOUNT: 10 mg, 50 mg

STRUCTURE:



MOLECULAR FORMULA: C₁₃H₂₂O₄

MOLECULAR WEIGHT: 242.3

CAS NUMBER: 3133-16-2

APPEARANCE: Crystalline solid

SOLUBILITY: DMSO (~30 mg/ml)

PURITY: ≥98%

STORAGE: Store at -20 °C. Protect from light and light

DESCRIPTION: 4-Octyl itaconate is an endogenous metabolite of itaconate that activates the anti-inflammatory transcription factor Nrf2 (also known as NFE2L2) by lipopolysaccharide in mouse and human macrophages. Itaconate alkylates cysteine residues 151, 257, 288, 273 and 297 on the protein KEAP1, enabling Nrf2 to increase the expression of downstream gene. *In vivo*, 4-octyl itaconate (50 mg/kg) decreases serum levels of IL-1β and TNF-α, increases Nrf2 protein expression, and protects against LPS-induced lethality in wild-type, but not Nrf2 knockout, mice.

REFERENCES: Mills, E.L., *et al.* (1028). *Nature* **556**, 113-117.

HANDLING: Do not take internally. Wear gloves and mask when handling the product! Avoid contact by all modes of exposure.

RELATED PRODUCTS:

Bardoxolone (**B1170**)

NRF2 (human) Transcription Factor Activity Assay Kit (**E4337**)

Dimethyl Fumarate (**9660**)

β-Glycyrrhetic acid (**9586**)

USAGE: **FOR RESEARCH USE ONLY! Not to be used in humans**