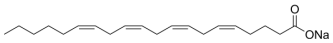
Arachidonic acid sodium salt

Cat. No.:	HY-109590A
CAS No.:	6610-25-9
Molecular Formula:	$C_{20}H_{31}NaO_2$
Molecular Weight:	326.45
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Arachidonic acid (Immunocytophyt) sodium salt is a polyunsaturated omega-6 fatty acid and a major constituent of biomembranes. Arachidonic acid sodium salt also acts as the substrate for various lipid mediators, such as prostaglandins (PGs). Arachidonic acid sodium salt improves cognitive response and cardiovascular function[1].

IC_{50} & Target

Human Endogenous Metabolite

In Vivo

Arachidonic acid (0.07%, 0.15% or 0.32% in diet; 4 weeks) sodium salt increases Arachidonic acid content in the paw, but has no effect on arthritis severity and PGE2 content of the paw in a rat arthritis model[1].

Induction of Paw Edema Model[2]

- Background

  Principle: Injecting arachidonic acid into the hind paws ofrats can induce rapid and sustained inflammatory responses.

- Specific Mmodeling Methods

  Rats: Lewis • male •

  Administration:0.5% • s.c. • single dose

  Note

  Injection method: A single subcutaneous injection of Arachidonic acid in the right hind paw of male Lewis rats (144-241 g) with an injection volume of 0.10 mL (Arachidonic acid is dissolved in 0.2 M carbonate buffer, pH 8.43-8.56).

- Modeling Indicators

  AppearanceMonitoring: Significant edema became apparent within 5 minutes, andthe reaction reached its peak at 1 hour after injection.

- Opposite Product(s): Phenidone (HY-W010144); SK-F86002 (HY-12511)

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

Animal Model:	Male Lew rats (4-week-old) induced arthritis[1]
Dosage:	0.07%, 0.15% or 0.32% in diet (w/w)
Administration:	4 weeks
Result:	The Arachidonic acid content of phospholipids in the paw was significantly elevated in a dose-dependent manner.

CUSTOMER VALIDATION

- Gut Microbes. 2023 Dec;15(2):2265578.
- Redox Biol. 2023 Aug 18;66:102857.
- Redox Biol. 15 October 2021, 102168.
- Cell Death Dis. 2023 Jun 13;14(6):359.
- Cell Death Dis. 2020 Sep 15;11(9):756.

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REFERENCES

[1]. Norifumi Tateishi, et al. Dietary supplementation with arachidonic acid increases arachidonic acid content in paw, but does not affect arthritis severity or prostaglandin E2 content in rat adjuvant-induced arthritis model. Lipids Health Dis. 2015 Jan 16:14:3.

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