

## Complete Freund's adjuvant

## Chemical Properties

CAS No. : 9007-81-2

Formula:

Molecular Weight:

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.

## Biological Description

Description	Complete Freund's adjuvant (CFA) is an emulsified immunostimulant containing mineral oil and heat-killed mycobacteria, capable of inducing Th1 responses and enhancing immune reactions. It is frequently employed in establishing rat models of rheumatoid arthritis and persistent inflammatory pain.
Targets(IC50)	Immunology/Inflammation related
In vitro	Complete Freund's adjuvant (CFA) is a powerful Th1-type immune response trigger containing various microbial TLR ligands such as TLR 2, 4, and 9 [1].
In vivo	Complete Freund's adjuvant (CFA) releases inflammatory mediators such as TNF- $\alpha$ and IL-6 upon entering the body. These mediators can activate peripheral nerve endings and act on nociceptive nerve terminals, thereby leading to the occurrence of neuropathic pain [2][3].

## Reference

Fontes JA, et al. Complete Freund's adjuvant induces experimental autoimmune myocarditis by enhancing IL-6 production during initiation of the immune response. *Immun Inflamm Dis.* 2017 Jun;5(2):163-176.

Ji YW, et al. Plasticity in ventral pallidal cholinergic neuron-derived circuits contributes to comorbid chronic pain-like and depression-like behaviour in male mice. *Nat Commun.* 2023 Apr 17;14(1):2182.

Sun T, et al. Gastrodin relieved complete Freund's adjuvant-induced spontaneous pain by inhibiting inflammatory response. *Int Immunopharmacol.* 2016 Dec;41:66-73.

Projean D, et al. Use of Freund's Complete Adjuvant (FCA) in inflammatory pain models: consequences on the metabolism and pharmacokinetics of the non-peptidic delta receptor agonist SNC80 in the rat. *Xenobiotica.* 2007 Aug;37(8):870-83.

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