

Anti-inflammatory agent 107

Chemical Properties

CAS No. :

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	Anti-inflammatory agent 107 is an orally effective compound that serves as a potent anti-inflammatory agent. It inhibits NF- κ B with a strong binding affinity of -9.4578 kcal/mol. The agent reduces levels of inflammatory markers such as TNF- α , IL-6, INF- γ , NF- κ B, CRP (C-reactive protein), and ESR (Erythrocyte Sedimentation Rate). Additionally, it enhances the activity of endogenous antioxidant systems by increasing SOD (superoxide dismutase), CAT (catalase), and GSH (glutathione). Notably, Anti-inflammatory agent 107 exhibits no hepatic or renal toxicity and provides significant protective effects for the liver and kidneys. It also improves leukocyte infiltration and tissue edema in a dose-dependent manner, making it valuable for anti-inflammatory research.
Targets(IC50)	NF- κ B, Glutathione Peroxidase, mTOR
In vitro	Anti-inflammatory agent 107 (compound 4D) demonstrates potent anti-inflammatory effects by inhibiting the NF- κ B signaling pathway, with a docking score of -9.4578 kcal/mol. In experiments on human red blood cell membrane stabilization (antihemolytic) and protein denaturation inhibition, its concentration (50 μ g/mL in 2 mL system, 50 μ g/mL in 0.02 mL system) also showed strong anti-inflammatory activity.
In vivo	Compound 4D, known as Anti-inflammatory agent 107, administered orally at a dose of 20-50 μ g/kg once daily for one week, has been shown to decrease levels of inflammatory biomarkers, enhance and restore the antioxidant defense system (GSH, CAT, SOD), alleviate nephrotoxicity, and reduce leukocyte infiltration in a rat model of κ -Carrageenan-induced paw edema.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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