Flunixin meglumine

Cat. No.: HY-B0386

CAS No.: 42461-84-7

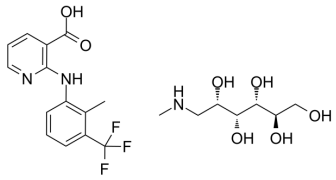
Molecular Formula: $C_{21}H_{28}F_3N_3O_7$

Molecular Weight: 491.46

Target: COX

Pathway: Immunology/Inflammation

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (203.48 mM)
H_2O : 50 mg/mL (101.74 mM; Need ultrasonic)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.0348 mL	10.1738 mL	20.3475 mL
5 mM	0.4070 mL	2.0348 mL	4.0695 mL
10 mM	0.2035 mL	1.0174 mL	2.0348 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 50 mg/mL (101.74 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.09 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.09 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.09 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Flunixin meglumine is a cyclooxygenase (COX) inhibitor with IC_{50} values of 0.55 and 3.24 μM for COX-1 and COX-2, respectively. Flunixin meglumine shows anti-inflammatory effects[1][2].

IC_{50} & Target

COX-1	COX-2
0.55 μM (IC_{50})	3.24 μM (IC_{50})

In Vitro

flunixin meglumine (10-1000 μM, 2 h) inhibits lipopolysaccharide (LPS)-induced activity of inducible nitric oxide synthase (iNOS) in RAW 264.7 murine macrophages[2].
flunixin meglumine (10-1000 μM, 2 h) inhibits lipopolysaccharide-induced activation of nuclear factor kappa B (NfκB) in RAW 264.7 murine macrophages[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[2]

Cell Line:	RAW 264.7 murine macrophages
Concentration:	10, 100, 300, and 1000 μM
Incubation Time:	2 hours
Result:	Inhibited LPS-induced nitric oxide release at concentrations between 100 and 1,000 μM (P=0.01).

In Vivo

Flunixin meglumine (intravenous injection; 1.1 mg/kg; once) treatment inhibits the formation of exudate PGE2 and serum TXB2[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male sheep injected with Carrageenan[1]
Dosage:	1.1 mg/kg
Administration:	Intravenous injection; 1.1 mg/kg; once
Result:	Inhibited Carrageenan-induced exudate PGE2 formation (E_{max}, 100%, IC_{50}, <0.4 nM) and serum TXB2 generation (E_{max}, 100%, IC_{50}, 17 nM) for up to 32 h.

REFERENCES

[1]. Z Cheng, et al. Measurement of cyclooxygenase inhibition in vivo: a study of two non-steroidal anti-inflammatory drugs in sheep. Inflammation. 1998 Aug;22(4):353-66.

[2]. Clare E Bryant, et al. Evaluation of the ability of carprofen and flunixin meglumine to inhibit activation of nuclear factor kappa B. Am J Vet Res. 2003 Feb;64(2):211-5.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA