Aspirin-d_4

Cat. No.: HY-14654S1

CAS No.: 97781-16-3

Molecular Formula: $C_9H_4D_4O_4$

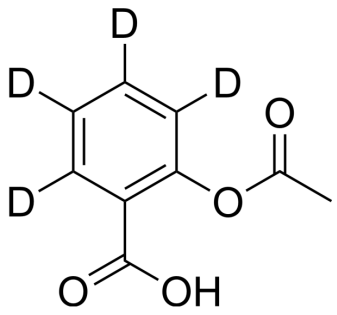
Molecular Weight: 184.18

Target: COX; Autophagy; Mitophagy; Virus Protease

Pathway: Immunology/Inflammation; Autophagy; Anti-infection

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (542.95 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	5.4295 mL	27.1474 mL	54.2947 mL
	5 mM	1.0859 mL	5.4295 mL	10.8589 mL
	10 mM	0.5429 mL	2.7147 mL	5.4295 mL

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

BIOLOGICAL ACTIVITY

Description

Aspirin-d_4 is the deuterium labeled Aspirin. Aspirin is a non-selective and irreversible inhibitor of COX-1 and COX-2 with IC50s of 5 and 210 μg/mL[1][2].

In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].

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

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Mitchell JA, et al. Selectivity of nonsteroidal antiinflammatory drugs as inhibitors of constitutive and inducibleCyclooxygenase. Proc Natl Acad Sci U S A. 1993 Dec 15;90(24):11693-7.

[3]. Vane JR, et al. The mechanism of action of aspirin. Thromb Res. 2003 Jun 15;110(5-6):255-8.

[4]. Wu KK, et al. Aspirin and other cyclooxygenase inhibitors: new therapeutic insights. Semin Vasc Med. 2003 May;3(2):107-12.

[5]. Kopp E, et al. Inhibition of NF-kappa B by sodium salicylate and aspirin. Science. 1994 Aug 12;265(5174):956-9.

[6]. Blanco FJ, et al. Effect of antiinflammatory drugs on COX-1 and COX-2 activity in human articular chondrocytes. J Rheumatol. 1999 Jun;26(6):1366-73.

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