Product Data Sheet

Product Name: Aspirin-d3
Cat. No.: GC63683

Chemical Properties

Cas. No.	921943-73-9		
Formula	$C_9H_5D_3O_4$	M.Wt	183.18
Solubility	DMSO : 100 mg/mL (545.91 mM; Need ultrasonic); DMSO : 100 mg/mL (545.91 mM; Need ultrasonic)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Aspirin-d3		

Background

Aspirin-d3 (Acetylsalicylic Acid-d3) 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.

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].

[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.;Vane JR, et al. The mechanism of action of aspirin. Thromb Res. 2003 Jun 15;110(5-6):255-8.;Wu KK, et al. Aspirin and other cyclooxygenase inhibitors: new therapeutic insights. Semin Vasc Med. 2003 May;3(2):107-12.;Kopp E, et al. Inhibition of NF-kappa B by sodium salicylate and aspirin. Science. 1994 Aug 12;265(5174):956-9.;Blanco FJ, et al.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA