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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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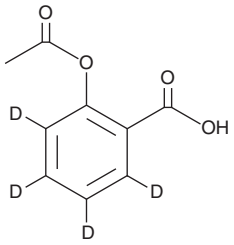
PRODUCT INFORMATION

Aspirin-d_4

Item No. 18243

CAS Registry No.:	97781-16-3
Formal Name:	6-(acetyloxy)-benzoic-2,3,4,5-d_4 acid
Synonym:	Acetylsalicylic Acid-d_4
MF:	$C_9H_4D_4O_4$
FW:	184.2
Chemical Purity:	≥95% Aspirin
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_4); ≤1% d_0
UV/Vis.:	λ_{max}: 225 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

Aspirin-d_4 contains 4 deuterium atoms at the 2, 3, 4, and 5 positions. It is intended for use as an internal standard for the quantification of aspirin (Item No. 70260) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Aspirin-d_4 is supplied as a crystalline solid. A stock solution may be made by dissolving the aspirin-d_4 in the solvent of choice. Aspirin-d_4 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of aspirin-d_4 in these solvents is approximately 80, 41, and 30 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of aspirin-d_4 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of aspirin-d_4 in PBS, pH 7.2, is approximately 2.7 mg/ml. Avoid adding aspirin to basic solutions (pH > 7.4), since base treatment will hydrolyze aspirin to salicylic acid. Store aqueous solutions of aspirin on ice and use within 30 minutes of preparation.

Description

Aspirin is a non-selective, irreversible COX inhibitor. The IC_{50} values for ovine COX-1 and -2 are 0.75 and 1.25 mM, respectively.[1] Aspirin acetylates COX-1 at Ser^{530} and COX-2 at Ser^{516} resulting in irreversible enzyme inhibition.

Reference

1. Johnson, J.L., Wimsatt, J., Buckel, S.D., *et al.* Purification and characterization of prostaglandin H synthase-2 from sheep placental cotyledons. *Arch. Biochem. Biophys.* **324**, 26-34 (1995).

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