



7-keto Cholesterol-d₇

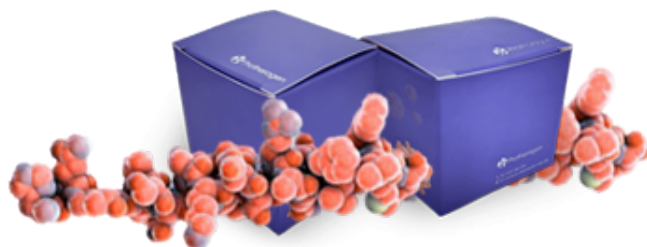
Cat. No.:	OB0626WX-1767
Appearance:	Solid
Purity:	≥99% (deuterated forms, d ₁ -d ₇)
Identity:	Confirmed by NMR, TLC, and HPLC.
Size:	1 mg; 5 mg; 10 mg; 25 mg

This product is for research use only and is not intended for diagnostic use.

Product Overview

Description	7-keto Cholesterol-d ₇ is a stable isotope-labeled internal standard engineered for the robust quantification of 7-keto cholesterol <i>via</i> mass spectrometry workflows. The unlabeled analyte represents a prominent pro-inflammatory oxysterol component of oxidized lipoproteins that modulates enzymatic sterol metabolism and drives microglial activation, cell migration, and tissue neovascularization cascades.
Labeling	Stable isotope-labeled
Synonyms	3β-hydroxy-cholest-5-en-7-one-25,26,26,26,27,27,27-d ₇ ; Δ ⁵ -Cholesterol -3β-ol-7-one-d ₇ ; 7-oxo Cholesterol-d ₇ ; 127684-08-6; 7-Keto cholesterol-d ₇ ; 7-Ketocholesterol-25,26,26,26,27,27,27-d ₇ ; (3S,8S,9S,10R,13R,14S,17R)-3-hydroxy-10,13-dimethyl-17-[(2R)-6,7,7,7-tetradeuterio-6-(trideuteriomethyl)heptan-2-yl]-1,2,3,4,8,9,11,12,14,15,16,17-dodecahydrocyclopenta[a]phenanthren-7-one; 7-Oxocholesterol(d ₇); 7-oxo-cholest-5-en-3β-ol(d ₇); (3S,8S,9S,10R,13R,14S,17R)-3-hydroxy-10,13-dimethyl-17-[(1R)-5,6,6,6-tetradeuterio-1-methyl-5-(trideuteriomethyl)hexyl]-1,2,3,4,8,9,11,12,14,15,16,17-dodecahydrocyclopenta[a]phenanthren-7-one
CAS No.	127684-08-6
Compound CID	3247054
Formula	C ₂₇ H ₃₇ D ₇ O ₂
Formula Weight	407.7

Specification



Solubility in DMSO	0.1 mg/mL
Solubility in Ethanol	20 mg/mL
Solubility in DMF	2 mg/mL
IUPAC Name	(3 <i>S</i> ,8 <i>S</i> ,9 <i>S</i> ,10 <i>R</i> ,13 <i>R</i> ,14 <i>S</i> ,17 <i>R</i>)-3-hydroxy-10,13-dimethyl-17-[(2 <i>R</i>)-6,7,7,7-tetradeuterio-6-(trideuteriomethyl) heptan-2-yl]-1,2,3,4,8,9,11,12,14,15,16,17-dodecahydrocyclopenta[<i>a</i>]phenanthren-7-one
InChI	InChI=1S/C27H44O2/c1-17(2)7-6-8-18(3)21-9-10-22-25-23(12-14-27(21,22)5)26(4)13-11-20(28)15-19(26)16-24(25)29/h16-18,20-23,25,28H,6-15H2,1-5H3/t18-,20+,21-,22+,23+,25+,26+,27-/m1/s1/i1D3,2D3,17D
InChI Key	YIKKMWSQVKJCOP-KVZGVLACSA-N
Canonical SMILES	<chem>O[C@H](C1)CC[C@@]2(C)C1=CC([C@]3([H])[C@]2([H])CC[C@@]4(C)[C@@]3([H])CC[C@]4([H])[C@@H](CCCC(C([2H])([2H])([2H])([2H])C([2H])([2H])([2H])C)=O</chem>
Stability	1 year
Storage	Storage at -20°C.
Applications	7-keto Cholesterol-d ₇ is applied as a stable isotope-labeled reference compound for the quantitative analysis of oxidized cholesterol metabolites. It supports lipidomic investigations of cholesterol oxidation pathways and the characterization of oxysterol profiles.