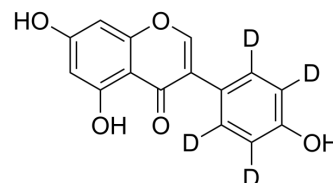


Genistein-d₄

Cat. No.:	HY-14596S		
CAS No.:	187960-08-3		
Molecular Formula:	C ₁₅ H ₆ D ₄ O ₅		
Molecular Weight:	274.26		
Target:	Apoptosis; EGFR; Autophagy; Endogenous Metabolite		
Pathway:	Apoptosis; JAK/STAT Signaling; Protein Tyrosine Kinase/RTK; Autophagy; Metabolic Enzyme/Protease		
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 : 50 mg/mL (182.31 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	Preparing Stock Solutions			1 mg	5 mg
		1 mM		3.6462 mL	18.2309 mL
		5 mM		0.7292 mL	3.6462 mL
10 mM			0.3646 mL	1.8231 mL	
	Please refer to the solubility information to select the appropriate solvent.				
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 1.25 mg/mL (4.56 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 1.25 mg/mL (4.56 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 1.25 mg/mL (4.56 mM); Clear solution 				

BIOLOGICAL ACTIVITY

Description	Genistein-d ₄ is the deuterium labeled Genistein. Genistein, a soy isoflavone, is a multiple tyrosine kinases (e.g., EGFR) inhibitor which acts as a chemotherapeutic agent against different types of cancer, mainly by altering apoptosis, the cell cycle, and angiogenesis and inhibiting metastasis[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]. Peterson G, et al. Genistein inhibits both estrogen and growth factor-stimulated proliferation of human breast cancer cells. *Cell Growth Differ*. 1996 Oct;7(10):1345-51.
- [3]. Ding S, et al. Environmentally Relevant Dose of Bisphenol A Does Not Affect Lipid Metabolism and Has No Synergetic or Antagonistic Effects on Genistein's Beneficial Roles on Lipid Metabolism. *PLoS One*. 2016 May 12;11(5):e0155352.
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Caution: Product has not been fully validated for medical applications. For research use only.

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