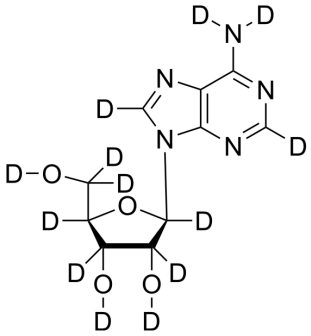
Adenosine-d_{13}

Cat. No.:	HY-B0228S12
Molecular Formula:	$C_{10}D_{13}N_5O_4$
Molecular Weight:	280.32
Target:	Isotope-Labeled Compounds; Nucleoside Antimetabolite/Analog; Endogenous Metabolite; Autophagy; Apoptosis
Pathway:	Others; Cell Cycle/DNA Damage; Metabolic Enzyme/Protease; Autophagy; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Adenosine-d_{13} (Adenine riboside-d_{13}; D-Adenosine-d_{13}) is deuterium labeled Adenosine (HY-B0228). Adenosine (Adenine riboside), a ubiquitous endogenous autacoid, acts through the enrollment of four G protein-coupled receptors: A1, A2A, A2B, and A3. Adenosine affects almost all aspects of cellular physiology, including neuronal activity, vascular function, platelet aggregation, and blood cell regulation.
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 Feb;53(2):211-216.

[2]. Zhou XT, et al. Inhibition of autophagy enhances adenosine induced apoptosis in human hepatoblastoma HepG2 cells. Oncol Rep. 2019;41(2):829-838.

[3]. Eltzschig HK. Adenosine: an old drug newly discovered. Anesthesiology. 2009;111(4):904-915.

[4]. Borea PA, Gessi S, Merighi S, Vincenzi F, Varani K. Pharmacology of Adenosine Receptors: The State of the Art. Physiol Rev. 2018;98(3):1591-1625.

[5]. Fredholm BB. Adenosine, an endogenous distress signal, modulates tissue damage and repair. Cell Death Differ. 2007;14(7):1315-1323.

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