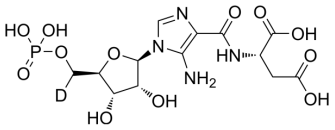
SAICAR-d

Cat. No.:	HY-126585S
Molecular Formula:	$C_{13}H_{18}DN_4O_{12}P$
Molecular Weight:	455.29
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	SAICAR-d is the deuterium labeled SAICAR. SAICAR is an intermediate of de novo purine nucleotide biosynthesis, activates pyruvate kinase isoform M2 (PKM2) in an isozyme-selective manner, with an EC50 of 0.3 mM. SAICAR stimulates PKM2 and promotes cancer cell survival in glucose-limited conditions[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[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Keller KE, et al. SAICAR stimulates pyruvate kinase isoform M2 and promotes cancer cell survival in glucose-limited conditions. Science. 2012 Nov 23;338(6110):1069-72.

[2]. Keller KE, et al. SAICAR induces protein kinase activity of PKM2 that is necessary for sustained proliferative signaling of cancer cells. Mol Cell. 2014 Mar 6;53(5):700-9.

[3]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-223.

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