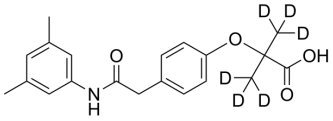
Efaproxiral-d_6

Cat. No.:	HY-13619S
CAS No.:	1246815-16-6
Molecular Formula:	$C_{20}H_{17}D_6NO_4$
Molecular Weight:	347.44
Target:	Reactive Oxygen Species; Isotope-Labeled Compounds
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Efaproxiral-d_6 is the deuterium labeled Efaproxiral. Efaproxiral (RSR13) is a haemoglobin (Hb) synthetic allosteric modifier, decreases Hb-oxygen (O2) binding affinity and enhances oxygenation of hypoxic tumours during radiation therapy[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]. Stea B, et al. Efaproxiral red blood cell concentration predicts efficacy in patients with brain metastases. Br J Cancer. 2006 Jun 19;94(12):1777-1784.

[3]. Abraham DJ, et al. Allosteric modifiers of hemoglobin: 2-[4-[[(3,5-disubstituted anilino)carbonyl]methyl]phenoxy]-2-methylpropionic acid derivatives that lower the oxygen affinity of hemoglobin in red cell suspensions, in whole blood, and in vivo in rats. Biochemistry. 1992 Sep 29;31(38):9141-9.

[4]. Hou H, et al. The effects of Efaproxyn (efaproxiral) on subcutaneous RIF-1 tumor oxygenation and enhancement of radiotherapy-mediated inhibition of tumor growth in mice. Radiat Res. 2007 Aug;168(2):218-25.

[5]. Hou H, et al. Increased oxygenation of intracranial tumors by efaproxyn (efaproxiral), an allosteric hemoglobin modifier: In vivo EPR oximetry study. Int J Radiat Oncol Biol Phys. 2005 Apr 1;61(5):1503-9.

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