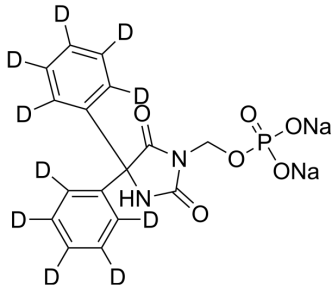
Fosphenytoin-d_{10} disodium

Cat. No.:	HY-B1657AS
Molecular Formula:	$C_{16}H_3D_{10}N_2Na_2O_6P$
Molecular Weight:	416.3
Target:	Sodium Channel; Isotope-Labeled Compounds
Pathway:	Membrane Transporter/Ion Channel; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Fosphenytoin-d_{10} (disodium) is deuterium labeled Fosphenytoin (disodium). Fosphenytoin sodium is a phenytoin proagent with similar anticonvulsant properties. Its main mechanism is to block frequency-dependent, use-dependent and voltage-dependent neuronal sodium channels, and therefore limit repetitive firing of action potentials.
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]. Chan SA, et al. Fosphenytoin reduces hippocampal neuronal damage in rat following transient global ischemia. Acta Neurochir (Wien). 1998;140(2):175-80.

[3]. Loscher W, et al. Anticonvulsant effect of fosphenytoin in amygdala-kindled rats: comparison with phenytoin. Epilepsy Res. 1998 Mar;30(1):69-76.

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