## Latanoprost-d4

Cat. No.:	HY-B0577S	
Molecular Formula:	C <sub>26</sub> H <sub>36</sub> D <sub>4</sub> O <sub>5</sub>	
Molecular Weight:	436.62	HQ
Target:	Prostaglandin Receptor	
Pathway:	GPCR/G Protein	
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.	HO

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Product Data Sheet

BIOLOGICAL ACTIVITY		
DIOLOGICAL ACTIVITY		
Description	Latanoprost-d4 (PHXA41-d4) is the deuterium labeled Latanoprost. Latanoprost (PHXA41) is a prostaglandin F2α analogue and an agonist for the FP prostanoid receptor, and lowers intraocular-pressure (IOP).	
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 <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
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## REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Zheng J, et al. Latanoprost promotes neurite outgrowth in differentiated RGC-5 cells via the PI3K-Akt-mTOR signaling pathway. Cell Mol Neurobiol. 2011 May;31(4):597-604.

[3]. Ooi YH, et al. Effect of bimatoprost, latanoprost, and unoprostone on matrix metalloproteinases and their inhibitors in human ciliary body smooth muscle cells. Invest Ophthalmol Vis Sci. 2009 Nov;50(11):5259-65.

[4]. B'Ann True Gabelt, et al. Prostaglandin Subtype-Selective and Non-Selective IOP-Lowering Comparison in Monkeys.

[5]. Pauly A, et al. In vitro and in vivo comparative toxicological study of a new preservative-free latanoprost formulation. Invest Ophthalmol Vis Sci. 2012 Dec 13;53(13):8172-80.

[6]. Tsai S, et al. The effect of topical latanoprost on anterior segment anatomic relationships in normal dogs. Vet Ophthalmol. 2013 Sep;16(5):370-6.

Caution: Product has not been fully validated for medical applications. For research use only.

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