

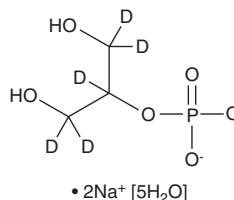
# PRODUCT INFORMATION



## $\beta$ -Glycerophosphate-d<sub>5</sub> (sodium salt hydrate)

Item No. 34516

<b>Formal Name:</b>	1,2,3-propanetriol-d <sub>5</sub> , 2-(dihydrogen phosphate), disodium salt, pentahydrate
<b>Synonym:</b>	Glycerol 2-Phosphate-d <sub>5</sub>
<b>MF:</b>	C <sub>3</sub> H <sub>2</sub> D <sub>5</sub> O <sub>6</sub> P • 2Na [5H <sub>2</sub> O]
<b>FW:</b>	311.1
<b>Chemical Purity:</b>	≥95% ( $\beta$ -Glycerophosphate)
<b>Deuterium Incorporation:</b>	≥99% deuterated forms (d <sub>1</sub> -d <sub>5</sub> ); ≤1% d <sub>0</sub>
<b>Supplied as:</b>	A solid
<b>Storage:</b>	-20°C
<b>Stability:</b>	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

$\beta$ -Glycerophosphate-d<sub>5</sub> (sodium salt hydrate) is intended for use as an internal standard for the quantification of  $\beta$ -glycerophosphate (Item No. 38367) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

$\beta$ -Glycerophosphate-d<sub>5</sub> (sodium salt hydrate) is supplied as a solid. A stock solution may be made by dissolving the  $\beta$ -glycerophosphate-d<sub>5</sub> (sodium salt hydrate) in the solvent of choice, which should be purged with an inert gas.  $\beta$ -Glycerophosphate-d<sub>5</sub> (sodium salt hydrate) is soluble in methanol and DMSO.

### Description

$\beta$ -Glycerophosphate is an inhibitor of alkaline phosphatase.<sup>1</sup> It decreases alkaline phosphatase activity and promotes bone mineralization in chick osteoblasts when used at concentrations of 10 and 20 mM.  $\beta$ -Glycerophosphate (10 mM) induces calcification of cultured bovine vascular smooth muscle cells (BVSMCs) in an alkaline phosphatase-dependent manner.<sup>2</sup>

### References

1. Chung, C.H., Golub, E.E., Forbes, E., *et al.* Mechanism of action on  $\beta$ -glycerophosphate on bone cell mineralization. *Calcif. Tissue Int.* **51(4)**, 305-311 (1992).
2. Shioi, A., Nishizawa, Y., Jono, S., *et al.*  $\beta$ -Glycerophosphate accelerates calcification in cultured bovine vascular smooth muscle cells. *Arterioscler. Thromb. Vasc. Biol.* **15(11)**, 2003-2009 (1995).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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