

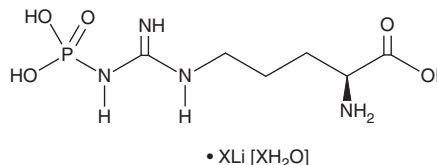
# PRODUCT INFORMATION



## Phospho-L-Arginine (lithium salt hydrate)

Item No. 23123

**Formal Name:** N<sup>5</sup>-[imino(phosphonoamino)methyl]-L-ornithine, lithium salt, hydrate  
**Synonyms:** L-Arginine-N<sup>G</sup>-Phosphoric Acid, N<sup>ω</sup>-Phospho-L-Arginine, L-Phosphoarginine  
**MF:** C<sub>6</sub>H<sub>15</sub>N<sub>4</sub>O<sub>5</sub>P • XLi [XH<sub>2</sub>O]  
**FW:** 254.2  
**Purity:** ≥95%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

Phospho-L-arginine (lithium salt hydrate) is supplied as a solid. A stock solution may be made by dissolving the phospho-L-arginine (lithium salt hydrate) in water. We do not recommend storing the aqueous solution for more than one day.

### Description

Phospho-L-arginine is a phosphorylated form of L-arginine (Item No. 23703) and a highly diffusible, high-energy metabolite and phosphagen involved in energy storage in invertebrates including crustaceans, insects, and *Trypanosoma* species.<sup>1,2</sup> In the locust *L. migratoria*, phospho-L-arginine is found in the flight muscles, where it acts as both a buffer system and shuttle mechanism for high-energy phosphate.<sup>3</sup> Measurement of phospho-L-arginine by <sup>31</sup>P-NMR spectroscopy has been used to study invertebrate energy metabolism *in vivo*.<sup>4,5</sup>

### References

1. Schoenenberger, B., Wszolek, A., Milesi, T., *et al.* Synthesis of N<sup>ω</sup>-phospho-L-arginine by biocatalytic phosphorylation of L-arginine. *ChemCatChem* **9**(1), 121-126 (2017).
2. Pereira, C.A. Arginine kinase: A potential pharmacological target in trypanosomiasis. *Infect. Disord. Drug Targets* **14**(1), 30-36 (2014).
3. Schneider, A., Wiesner, R.J., and Grieshaber, M.K. On the role of arginine kinase in insect flight muscle. *Insect Biochem.* **19**(5), 471-480 (1989).
4. Bailey, D.M., Peck, L.S., Bock, C., *et al.* High-energy phosphate metabolism during exercise and recovery in temperate and Antarctic scallops: An *in vivo* <sup>31</sup>P-NMR study. *Physiol. Biochem. Zool.* **76**(5), 622-633 (2003).
5. Platzer, E.G., Thompson, S.N., Borchardt, D.B., *et al.* High energy phosphate metabolites observed by NMR in infective larvae of *Haemonchus contortus*. *J. Parasitol.* **81**(3), 434-438 (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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