

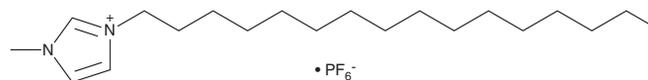
# PRODUCT INFORMATION



## 1-Hexadecyl-3-methylimidazolium hexafluorophosphate

Item No. 44014

**CAS Registry No.:** 219947-95-2  
**Formal Name:** 3-hexadecyl-1-methyl-1H-imidazolium, hexafluorophosphate  
**Synonyms:** 1-Palmityl-3-methylimidazolium hexafluorophosphate, C<sub>16</sub>mimPF<sub>6</sub>, HDMIM.PF<sub>6</sub>, HMIH



**MF:** C<sub>20</sub>H<sub>39</sub>N<sub>2</sub> • F<sub>6</sub>P  
**FW:** 452.5  
**Purity:** ≥98%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years

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

### Laboratory Procedures

1-Hexadecyl-3-methylimidazolium hexafluorophosphate (C<sub>16</sub>mimPF<sub>6</sub>) is supplied as a solid. A stock solution may be made by dissolving the C<sub>16</sub>mimPF<sub>6</sub> in the solvent of choice, which should be purged with an inert gas. C<sub>16</sub>mimPF<sub>6</sub> is soluble (≥10 mg/ml) in DMSO.

### Description

C<sub>16</sub>mimPF<sub>6</sub> is a long alkyl-chain imidazolium-based ionic liquid (LIL).<sup>1-3</sup> It has been used in the formation of inclusion complexes with β-cyclodextrin and as an electrolyte additive in aluminum-air batteries.<sup>2,3</sup> Incorporation of C<sub>16</sub>mimPF<sub>6</sub> (10-30 mol%) into phosphatidylcholine (PC) vesicles decreases particle size and turbidity and increases zeta potential.<sup>1</sup> PC vesicles containing C<sub>16</sub>mimPF<sub>6</sub> decrease the viability of HaCaT, A431, and SCC-25 cells to a lesser extent than those containing 1-hexadecyl-3-methylimidazolium bromide (C<sub>16</sub>mimBr).

### References

1. Liang, C.-H., Ho, W.-Y., Yeh, L.-H., *et al.* Effects of 1-hexadecyl-3-methylimidazolium ionic liquids on the physicochemical characteristics and cytotoxicity of phosphatidylcholine vesicles. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* **436**, 1083-1091 (2013).
2. Gao, Y., Zhao, X., Dong, B., *et al.* Inclusion complexes of β-cyclodextrin with ionic liquid surfactants. *J. Phys. Chem. B* **110(17)**, 8576-8581 (2006).
3. Guo, L., Zhang, Q., Huang, Y., *et al.* Effect of an imidazole-based ionic liquid as anti-corrosion additive on the performance of Al-air batteries. *J. Electroanal. Chem.* **941**, 117535 (2023).

#### 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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