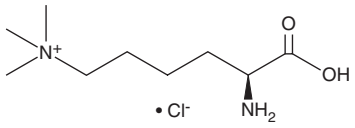
PRODUCT INFORMATION

$N^{\varepsilon},N^{\varepsilon},N^{\varepsilon}$-Trimethyllysine (chloride)

Item No. 33898

CAS Registry No.: 55528-53-5
Formal Name: 5-amino-5-carboxy-N,N,N-trimethyl-1-pentanaminium, monochloride
Synonyms: TML, N^{6}-Trimethyllysine, N^{ε}-Trimethyllysine
MF: $C_9H_{21}N_2O_2 \bullet Cl$
FW: 224.7
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

$N^{\varepsilon},N^{\varepsilon},N^{\varepsilon}$-Trimethyllysine (chloride) is supplied as a solid. Aqueous solutions of $N^{\varepsilon},N^{\varepsilon},N^{\varepsilon}$-trimethyllysine (chloride) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of $N^{\varepsilon},N^{\varepsilon},N^{\varepsilon}$-trimethyllysine (chloride) in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

$N^{\varepsilon},N^{\varepsilon},N^{\varepsilon}$-Trimethyllysine is an amino acid and a precursor in the biosynthesis of L-carnitine (Item No. 21489).[1] It is produced by intestinal microbiota or can be obtained by the degradation of post-translationally modified proteins or dietary sources.[2,3]

References

1. Strijbis, K., Vaz, F.M., and Distel, B. Enzymology of the carnitine biosynthesis pathway. *IUBMB Life* **62(5)**, 357-362 (2010).
2. Zhao, M., Zhao, L., Xiong, X., *et al*. TMAVA, a metabolite of intestinal microbes, is increased in plasma from patients with liver steatosis, inhibits γ-butyrobetaine hydroxylase, and exacerbates fatty liver in mice. *Gastroenterology* **158(8)**, 2266-2281 (2020).
3. Servillo, L., Giovane, A., Cautela, D., *et al*. Where does N^{ε}-trimethyllysine for the carnitine biosynthesis in mammals come from? *PLoS One* **9(1)**, e84589 (2014).

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