

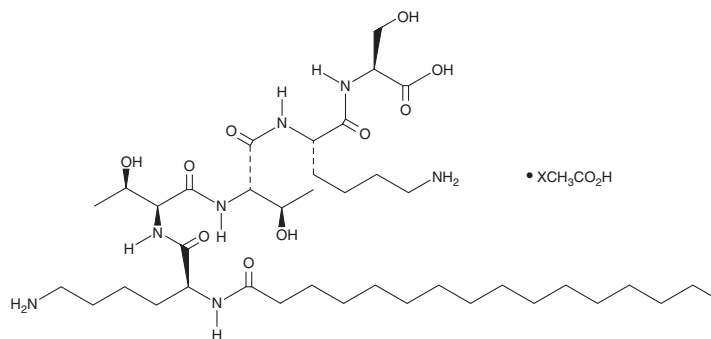
PRODUCT INFORMATION



Pal-KTTKS (acetate)

Item No. 27060

Formal Name: N²-(1-oxohexadecyl)-L-lysyl-L-threonyl-L-threonyl-L-lysyl-L-serine, acetate
Synonyms: C₁₆-KTTKS, Palmitoyl-KTTKS
MF: C₃₉H₇₅N₇O₁₀ • XC₂H₄O₂
FW: 802.1
Purity: ≥90%
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

Pal-KTTKS (acetate) is supplied as a solid. A stock solution may be made by dissolving the Pal-KTTKS (acetate) in the solvent of choice, which should be purged with an inert gas. Pal-KTTKS (acetate) is slightly soluble in methanol.

Pal-KTTKS (acetate) is slightly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Pal-KTTKS is a lipidated pentapeptide consisting of a fragment of the type I collagen C-terminal propeptide conjugated to palmitic acid (Item No. 10006627).¹ It increases collagen production in human corneal and dermal fibroblasts when used at concentrations of 0.002, 0.004, and 0.008 wt%.² Following topical administration, pal-KTTKS (50 µg/cm²) is found in the stratum corneum, epidermis, and dermis of isolated hairless mouse skin.¹ It can self-assemble into flat tapes and extended fibrillar structures.³ Pal-KTTKS has been detected in anti-wrinkle creams.⁴

References

1. Choi, Y.L., Park, E.J., Kim, E., *et al.* Dermal stability and *in vitro* skin permeation of collagen pentapeptides (KTTKS and palmitoyl-KTTKS). *Biomol. Ther. (Seoul)* **22(4)**, 321-327 (2014).
2. Jones, R.R., Castelletto, V., Connon, C.J., *et al.* Collagen stimulating effect of peptide amphiphile C₁₆-KTTKS on human fibroblasts. *Mol. Pharm.* **10(3)**, 1063-1069 (2013).
3. Castelletto, V., Hamley, I.W., Whitehouse, C., *et al.* Self-assembly of palmitoyl lipopeptides used in skin care products. *Langmuir* **29(29)**, 9149-9155 (2013).
4. Chirita, R.-I., Chaimbbault, P., Archambault, J.-C., *et al.* Development of a LC-MS/MS method to monitor palmitoyl peptides content in anti-wrinkle cosmetics. *Anal. Chim. Acta* **641(1-2)**, 95-100 (2009).

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.

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