



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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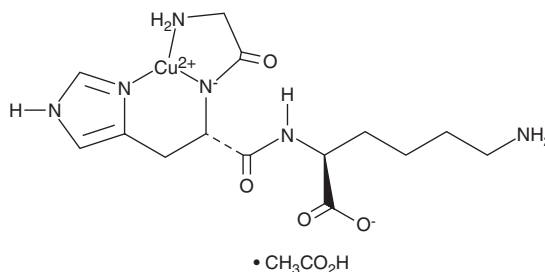
# PRODUCT INFORMATION



## GHK-Cu (acetate)

Item No. 28259

**CAS Registry No.:** 300801-03-0  
**Formal Name:** [glycyl-κN-L-histidyl-κN,κN<sup>3</sup>-L-lysinato(2-)]-copper, monoacetate  
**Synonym:** Gly-His-Lys-Cu(II)  
**MF:** C<sub>14</sub>H<sub>22</sub>CuN<sub>6</sub>O<sub>4</sub> • C<sub>2</sub>H<sub>4</sub>O<sub>2</sub>  
**FW:** 462.0  
**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

GHK-Cu (acetate) is supplied as a solid. Aqueous solutions of GHK-Cu (acetate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of GHK-Cu (acetate) in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

GHK-Cu is a complex of the tripeptide Gly-His-Lys and a copper(II) ion that has wound healing and anti-inflammatory activities.<sup>1-3</sup> It increases proliferation and the levels of collagen and secreted pro-matrix metalloproteinase-2 (MMP-2) in isolated human fibroblasts when used at a concentration of 1 nM.<sup>1,2,4</sup> GHK-Cu (2 mg) increases levels of collagen and glycosaminoglycans (GAGs) and the expression of decorin in the wound tissue of rats.<sup>5</sup> It decreases LPS-induced increases in the levels of reactive oxygen species (ROS), IL-6, and TNF-α in RAW 264.7 cells when used at a concentration of 10 μM.<sup>3</sup> GHK-Cu (10 μg/g) prevents LPS-induced decreases in lung superoxide dismutase (SOD) activity and glutathione (GSH) levels and reduces LPS-induced increases in the number of cells and the level of total protein in bronchoalveolar lavage fluid (BALF) in a mouse model of acute lung injury.

### References

1. Siméon, A., Emonard, H., Hornebeck, W., *et al.* The tripeptide-copper complex glycyl-L-histidyl-L-lysine-Cu<sup>2+</sup> stimulates matrix metalloproteinase-2 expression by fibroblast cultures. *Life Sci.* **67(18)**, 2257-2265 (2000).
2. Maquart, F.-X., Pickart, L., Laurent, M., *et al.* Stimulation of collagen synthesis in fibroblast cultures by the tripeptide-copper complex glycyl-L-histidyl-L-lysine-Cu<sup>2+</sup>. *FEBS Lett.* **238(2)**, 343-346 (1988).
3. Park, J.-R., Lee, H., Kim, S.-I., *et al.* The tri-peptide GHK-Cu complex ameliorates lipopolysaccharide-induced acute lung injury in mice. *Oncotarget* **7(36)**, 58405-58417 (2016).
4. Pollard, J.D., Quan, S., Kang, T., *et al.* Effects of copper tripeptide on the growth and expression of growth factors by normal and irradiated fibroblasts. *Arch. Facial Plast. Surg.* **7(1)**, 27-31 (2005).
5. Siméon, A., Wegrowski, Y., Bontemps, Y., *et al.* Expression of glycosaminoglycans and small proteoglycans in wounds: Modulation by the tripeptide-copper complex glycyl-L-histidyl-L-lysine-Cu<sup>2+</sup>. *J. Invest. Dermatol.* **115(6)**, 962-968 (2000).

#### 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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