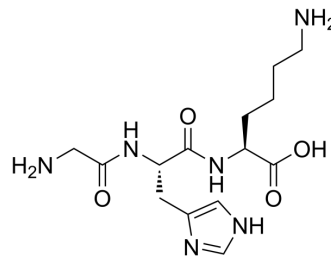


## Glycyl-L-histidyl-L-lysine

Cat. No.:	HY-P0046
CAS No.:	49557-75-7
Molecular Formula:	C <sub>14</sub> H <sub>24</sub> N <sub>6</sub> O <sub>4</sub>
Molecular Weight:	340.38
Target:	Others
Pathway:	Others
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : 100 mg/mL (293.79 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.9379 mL	14.6895 mL	29.3789 mL
	5 mM	0.5876 mL	2.9379 mL	5.8758 mL
	10 mM	0.2938 mL	1.4689 mL	2.9379 mL

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

Glycyl-L-histidyl-L-lysine is a tripeptide consisting of glycine, L-histidine and L-lysine residues joined in sequence. Glycyl-L-histidyl-L-lysine is a hepatotropic immunosuppressor and shows anxiolytic effect. Glycyl-L-histidyl-L-lysine and its copper complexes show good skin tolerance<sup>[1][2][3]</sup>.

#### In Vitro

Glycyl-L-histidyl-L-lysine and its copper complexes and saccharomyces/copper ferment on secretion of pro-inflammatory IL-6 in normal human dermal fibroblasts NHDF cell line<sup>[1]</sup>.  
Glycyl-L-histidyl-L-lysine and its copper complexes decreases TNF- $\alpha$ -dependent IL-6 secretion in fibroblasts<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

Glycyl-L-histidyl-L-lysine (intraperitoneal injection; 1.5, 5, 50, 150, and 450 mg/kg; 10 times ) can stimulate mitotic activity of hepatocytes and dose-dependently suppress immune reactivity<sup>[2]</sup>.  
Glycyl-L-histidyl-L-lysine (intraperitoneal injection; 0.5, 5, and 50  $\mu$ g/kg) can produce an anxiolytic effect in the elevated plus maze test<sup>[3]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## CUSTOMER VALIDATION

- Sci Adv. 2023 Sep;9(35):eadg7125.
- bioRxiv. 2023 Jan 31.

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## REFERENCES

- [1]. Arkadiusz Gruchlik, et al. Effect of Gly-Gly-His, Gly-His-Lys and their copper complexes on TNF-alpha-dependent IL-6 secretion in normal human dermal fibroblasts. Acta Pol Pharm. 2012 Nov-Dec;69(6):1303-6.
- [2]. M Yu Smakhtin, et al. Tripeptide Gly-His-Lys is a hepatotropic immunosuppressor. Bull Exp Biol Med. 2002 Jun;133(6):586-7.
- [3]. I Bobyntsev, et al. Anxiolytic effects of Gly-His-Lys peptide and its analogs. Bull Exp Biol Med. 2015 Apr;158(6):726-8.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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