



LKT Laboratories, Inc.

## Magainin 1

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### Product Information

Product ID M0124  
CAS No. 108433-99-4  
Chemical Name

Synonym

Formula  $C_{112}H_{177}N_{29}O_{28}S$   
Formula Wt. 2409.9

Melting Point

Purity  $\geq 95\%$

Solubility Soluble in water or 1%  
acetic acid (1 mg/mL)(clear  
colorless solution).

Store Temp  $-20^{\circ}C$

Ship Temp Ambient

**Description** Magainin 1 is a membrane-disruptive antimicrobial/antibacterial peptide (AMP) initially produced by African frogs. Magainin 1 exhibits antibacterial activity, inhibiting growth of gram positive bacteria by forming ion channels in bacterial membranes and altering membrane permeability; this prevents bacterial adhesion to membranes and inhibits bacterial growth. Magainin 1 also displays potential anticancer benefit in mammalian leukemia cells, increasing levels of ROS and release of cytochrome c and inducing apoptosis.

H-Gly-Ile-Gly-Lys-Phe-Leu-His-  
Ser-Ala-Gly-Lys-Phe-Gly-Lys-  
Ala-Phe-Val-Gly-Glu-Ile-Met-  
Lys-Ser-OH

**Bulk quantities available upon request**

Product ID	Size
M0124	0.5 mg
M0124	1 mg
M0124	2.5 mg

**References** Humblot V, Yala JF, Thebault P, et al. The antibacterial activity of Magainin I immobilized onto mixed thiols Self-Assembled Monolayers. *Biomaterials*. 2009 Jul;30(21):3503-12. PMID: 19345992.

Cruz-Chamorro L, Puertollano MA, Puertollano E, et al. In vitro biological activities of magainin alone or in combination with nisin. *Peptides*. 2006 Jun;27(6):1201-9. PMID: 16356589.

Mozsolits H, Wirth HJ, Werkmeister J, et al. Analysis of antimicrobial peptide interactions with hybrid bilayer membrane systems using surface plasmon resonance. *Biochim Biophys Acta*. 2001 May 2;1512(1):64-76. PMID: 11334625.

Matsuzaki K. Why and how are peptide-lipid interactions utilized for self-defense? Magainins and tachyplesins as archetypes. *Biochim Biophys Acta*. 1999 Dec 15;1462(1-2):1-10. PMID: 10590299.

Cruciani RA, Barker JL, Durell SR, et al. Magainin 2, a natural antibiotic from frog skin, forms ion channels in lipid bilayer membranes.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.