

PRODUCT INFORMATION



Magainin 2 (trifluoroacetate salt)

Item No. 36900

Formal Name:	10-L-lysine-22-L-asparagine-magainin I, trifluoroacetate salt	
Synonym:	MG2	
Peptide Sequence:	GIGKFLHSAKKFGKAFVGEIMNS-OH	H—Gly—Ile—Gly—Lys—Phe—Leu—His—Ser—Ala—Lys—
MF:	C ₁₁₄ H ₁₈₀ N ₃₀ O ₂₉ S • XCF ₃ COOH	Lys—Phe—Gly—Lys—Ala—Phe—Val—Gly—Glu—Ile—
FW:	2466.9	Met—Asn—Ser—OH
Purity:	≥95%	• XCF ₃ COOH
Supplied as:	A solid	
Storage:	-20°C	
Stability:	≥4 years	
Item Origin:	Synthetic	

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Magainin 2 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the magainin 2 (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Magainin 2 (trifluoroacetate salt) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of magainin 2 (trifluoroacetate salt) in these solvents is approximately 10 and 5 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of magainin 2 (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of magainin 2 (trifluoroacetate salt) in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Magainin 2 is a cationic peptide originally isolated from the skin of the African clawed frog (*X. laevis*) with roles in host defense and antimicrobial activity.¹ It is active against the bacteria *E. coli*, *K. pneumoniae*, *S. epidermidis*, *S. aureus*, and the fungus *C. albicans* (MICs = 5, 10, 10, 50, and 80 µg/ml, respectively). Magainin 2 (20 µM) reduces germination percentage and mean tube elongation in kiwi fruit pollen.² It decreases viral replication in Vero cells infected with herpes simplex virus 1 (HSV-1) or HSV-2 (EC₅₀s = 22.16 and 19.8 µM, respectively) without affecting cell viability with a 50% cytotoxic concentration value (CC₅₀) of greater than 100 µM.³

References

1. Zasloff, M. Magainins, a class of antimicrobial peptides from *Xenopus* skin: Isolation, characterization of two active forms, and partial cDNA sequence of a precursor. *Proc. Natl. Acad. Sci. USA* **84**(15), 5449-5453 (1987).
2. Speranza, A.M., Taddei, A.R., and Ovidi, E. *In vitro* toxicity towards kiwifruit pollen of the antimicrobial peptides magainins 1 and 2. *Plant Biol. (Stuttg.)* **9**(6), 800-806 (2007).
3. Albiol Matanic, V.C. and Castilla, V. Antiviral activity of antimicrobial cationic peptides against Junin virus and herpes simplex virus. *Int. J. Antimicrob. Agents* **23**(4), 382-389 (2004).

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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