PRODUCT INFORMATION

Cecropin A (trifluoroacetate salt)

Item No. 36901

Formal Name: L-lysyl-L-tryptophyl-L-lysyl-L-leucyl-L-phenylalanyl-L-lysyl-L-lysyl-L-isoleucyl-L-α-glutamyl-L-lysyl-L-valylglycyl-L-glutaminyl-L-asparaginyl-L-isoleucyl-L-arginyl-L-α-aspartylglycyl-L-isoleucyl-L-isoleucyl-L-lysyl-L-alanylglycyl-L-prolyl-L-alanyl-L-valyl-L-alanyl-L-valyl-L-valylglycyl-L-glutaminyl-L-alanyl-L-threonyl-L-glutaminyl-L-isoleucyl-L-alanyl-L-lysinamide, trifluoroacetate salt

MF: $C_{184}H_{313}N_{53}O_{46} \bullet XCF_3COOH$

FW: 4,003.8

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

H–Lys–Trp–Lys–Leu–Phe–Lys–Lys–Ile–Glu–Lys–Val–Gly–Gln–Asn–Ile–Arg–Asp–Gly–Ile–Ile–Lys–Ala–Gly–Pro–Ala–Val–Ala–Val–Val–Gly–Gln–Ala–Thr–Gln–Ile–Ala–Lys–NH_2 • XCF_3COOH

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

Laboratory Procedures

Cecropin A (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the cecropin A (trifluoroacetate salt) in water. We do not recommend storing the aqueous solution for more than one day.

Description

Cecropin A is an antimicrobial peptide that has been found in *H. cecropia*.[1,2] It induces apoptosis in *C. albicans* when used at a concentration of 5 µM.[2] Cecropin A is active against the planktonic and uropathogenic *E. coli* strain CFT073 (MIC = 100 µg/ml) and increases survival of CFT073-infected *G. mellonella* larvae.[1] Cecropin A (15 mg/kg) decreases enrichment of the gut microflora *Bacteroidaceae* and *Enterobacteriaceae* and increases gut levels of *Lactobacillus*, as well as increases survival and decreases body weight loss in a mouse model of inflammatory bowel disease (IBD) induced by dextran sulfate (DSS; Item No. 23250).[3]

References

1. Kalsy, M., Tonk, M., Hardt, M., *et al.* The insect antimicrobial peptide cecropin A disrupts uropathogenic *Escherichia coli* biofilms. *NPJ Biofilms Microbiomes* **6(1)**, 6 (2020).
2. Yun, J. and Lee, D.G. Cecropin A-induced apoptosis is regulated by ion balance and glutathione antioxidant system in *Candida albicans*. *IUBMB Life* **68(8)**, 652-662 (2016).
3. Zhai, Z., Zhang, F., Cao, R., *et al.* Cecropin A alleviates inflammation through modulating the gut microbiota of C57BL/6 mice with DSS-induced IBD. *Front. Microbiol.* **10**, 1595 (2019).

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