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PRODUCT INFORMATION



CRAMP (140-173) (mouse) (trifluoroacetate salt)

Item No. 37502

Synonyms:	Cathelicidin-related Antimicrobial Peptide, Cathelin-related Antimicrobial Peptide, mCRAMP	H—Gly—Leu—Leu—Arg—Lys—Gly—Gly—Glu—Lys—Ile— Gly—Glu—Lys—Leu—Lys—Lys—Ile—Gly—Gln—Lys— Ile—Lys—Asn—Phe—Phe—Gln—Lys—Leu—Val—Pro— Gln—Pro—Glu—Gln—OH • XCF ₃ COOH
Peptide Sequence:	GLLRKGGEKIGEKLLKKIGQKIKNFFQKLVPPQPEQ-OH	
MF:	C ₁₇₈ H ₃₀₂ N ₅₀ O ₄₆ • XCF ₃ COOH	
FW:	3,878.7	
Purity:	≥98%	
Supplied as:	A solid	
Storage:	-20°C	
Stability:	≥4 years	

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

Laboratory Procedures

CRAMP (140-173) (mouse) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the CRAMP (140-173) (mouse) (trifluoroacetate salt) in the solvent of choice. CRAMP (140-173) (mouse) (trifluoroacetate salt) is soluble in the organic solvent methanol, which should be purged with an inert gas. It is also soluble in water. We do not recommend storing the aqueous solution for more than one day.

Description

Cathelicidin-related antimicrobial peptide (CRAMP) (140-173) is a 34-amino acid peptide derivative of the 38-amino acid antimicrobial peptide CRAMP.^{1,2} Mature CRAMP is formed from cleavage of the full-length peptide by cathepsin G.^{3,4} CRAMP (140-173) (1 µg/ml) is active against *K. pneumoniae in vitro*.¹ It decreases neutrophil infiltration of colonic epithelial and luminal surfaces in a porcine model of colitis when administered at a dose of 10 mg/kg.⁵ Ileal administration of CRAMP (140-173) (10 mg/kg) decreases disease severity and cecal bacterial burden and increases survival in a mouse model of *C. difficile* infection.⁶ However, intra-articular administration of CRAMP (140-173) (10 µl of 25 µM) also increases disease severity and induces synovitis in a mouse model of surgery-induced osteoarthritis.⁷

References

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2. Shin, S.Y., Kang, S.W., Lee, D.G., et al. CRAMP analogues having potent antibiotic activity against bacterial, fungal, and tumor cells without hemolytic activity. *Biochem. Biophys. Res. Commun.* **275**(3), 904-909 (2000).
3. Gallo, R.L., Kim, K.J., Bernfield, M., et al. Identification of CRAMP, a cathelin-related antimicrobial peptide expressed in the embryonic and adult mouse. *J. Biol. Chem.* **272**(20), 13088-13093 (1997).
4. Woloszynek, J.C., Hu, Y., and Pham, C.T.N. Cathepsin G-regulated release of formyl peptide receptor agonists modulate neutrophil effector functions. *J. Biol. Chem.* **287**(41), 34101-34109 (2012).
5. Fodor, C.C., McCorkell, R., Muench, G., et al. Systemic murine cathelicidin CRAMP safely attenuated colonic neutrophil infiltration in pigs. *Vet. Immunol. Immunopathol.* **249**, 110443 (2022).
6. Xu, B., Wu, X., Gong, Y., et al. IL-27 induces LL-37/CRAMP expression from intestinal epithelial cells: Implications for immunotherapy of *Clostridioides difficile* infection. *Gut Microbes* **13**(1), 1968258 (2021).
7. Choi, M.-C., Jo, J., Lee, M., et al. Intra-articular administration of cramp into mouse knee joint exacerbates experimental osteoarthritis progression. *Int. J. Mol. Sci.* **22**(7), 3249 (2021).

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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