PRODUCT INFORMATION

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

Item No. 37502

Synonyms: Cathelicidin-related Antimicrobial Peptide, Cathelin-related Antimicrobial Peptide, mCRAMP
Peptide Sequence: GLLRKGGEKIGEKLKKIGQKIKNFFQKLVPQPEQ-OH
MF: $C_{178}H_{302}N_{50}O_{46} \bullet XCF_3COOH$
FW: 3,878.7
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years

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_3COOH

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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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).

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