TRM:CRAMP Knockout Mice In The C57bl/6 Background

Tech ID: 30514 / UC Case 2010-332-0

BACKGROUND

The mouse *Camp* gene is an ortholog of the human gene *CAMP*, which encodes the precursor of cathelicidin antimicrobial peptide LL-37 (or CRAMP in mouse). Expressed mucosal epithelial cells, circulating neutrophils, and myeloid bone marrow cells, *Camp* is an essential part of the first line of defense against infection. In addition to antimicrobial activity, cathelicidin antimicrobial peptide plays a role in NK cell-mediated tumor growth suppression, and when secreted by neutrophils acts, as an attractant for monocytes, promoting wound healing or angiogenesis. Mouse CRAMP is implicated in adaptive immune response regulation and can interfere with TLR function via interactions with hyaluronan. Mice deficient in CRAMP are more susceptible to experimentally induced necrotic skin infection with Group A *Streptococcus*, urinary tract infection with uropathogenic *E. coli*, *Pseudomonas aeruginosa* infection, and meningococcal *Neisseria meningitidis* infection.

APPLICATIONS

The *Camp* (formerly *Cnlp*) knock-out mice are more susceptible to bacterial infections and may be useful in studies of innate immune response, regulation of immune response, wound healing/angiogenesis and tumor development.

STATE OF DEVELOPMENT

The mice are designated Tangible Research Material (TRM). A complete description, including genotyping, phenotyping, etc is found at The Jackson Lab cat. No. 017799; https://www.jax.org/strain/017799

INTELLECTUAL PROPERTY INFO

Academic and non-profit institutions please order directly from The Jackson Laboratory. Commercial entities require a license from UC San Diego contact (https://innovation.ucsd.edu/contact/).

RELATED MATERIALS

▶ Nizet V, Ohtake T, Lauth X, Trowbridge J, Rudisill J, Dorschner RA, Pestonjamasp V, Piraino J, Huttner K, Gallo RL. Innate antimicrobial peptide protects the skin from invasive bacterial infection. Nature. 2001 Nov 22;414(6862):454-7. - 11/22/2001

CONTACT

University of California, San Diego
Office of Innovation and Commercialization
innovation@ucsd.edu
tel: 858.534.5815.

OTHER INFORMATION

KEYWORDS

Cathelicidin LL-37,antimicrobial peptides, innate immunity, immunomodulation, adaptive immunity, neutrophils, inflammation, host defense

CATEGORIZED AS

- **Medical**
  - Disease: Autoimmune and Inflammation
  - Disease: Infectious Diseases
  - Research Tools
  - Animal Models

RELATED CASES

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