



THE UNIVERSITY of TEXAS

HEALTH SCIENCE CENTER AT HOUSTON

Office of Technology Management

C5A RECEPTOR "KNOCK OUT" MICE

The Technology: A researcher at the University of Texas Health Science Center at Houston (UTHSC-H) has developed complement anaphylatoxin C5a receptor-deficient mice on C57Black6 genetic background via the disruption of the C5aR gene. It is becoming increasingly clear that C5aR plays an important role in the regulation of many physiological and cellular responses characteristic of acute shock and that the C3aR functions to temper the immune response in acute shock. This well-characterized model lacks the complement C5a, making it an excellent model for studying the relationship between C5a and septic shock.

Publications:

- Hollmann TJ, Mueller-Ortiz SL, Braun MC, Wetsel RA. Disruption of the C5a receptor gene increases resistance to acute Gram-negative bacteremia and endotoxic shock: opposing roles of C3a and C5a. *Mol Immunol.* 2008 Apr;45(7):1907-15. Epub 2007 Dec 11. [Click here to read](#)
- Drouin SM, Kildsgaard J, Haviland J, Zabner J, Jia HP, McCray PB Jr, Tack BF, Wetsel RA. Expression of the complement anaphylatoxin C3a and C5a receptors on bronchial epithelial and smooth muscle cells in models of sepsis and asthma. *J Immunol.* 2001 Feb 1;166(3):2025-32.

NON-CONFIDENTIAL TECHNOLOGY DESCRIPTION

The preceding is intended to be a non-confidential summary of a novel technology created at the University of Texas Health Science center at Houston (UTHSCH), for which the University has obtained patent protection.

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Patent Status: N/A

License Available: world-wide; non-exclusive

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