Model Name
Staphylococcus aureus (Smith, ATCC 19636), Dermal Infection

Item Number
608070

Introduction
This model evaluates the antimicrobial efficacy of test articles for treatment of superficial skin infections. Microbial counts are measured. Staphylococcus aureus is a common cause of skin infections as well as serious life threatening diseases such as pneumonia, osteomyelitis, endocarditis, bacteremia and sepsis.

Procedure Summary
Groups of 5 immune competent mice are used. The animals are anesthetized, the fur on the back is removed with an electric shaver, and the epidermal layer is disrupted with an abrasive paper. Infection is initiated by placing a droplet containing pathogen suspension on the wound area. Test article is administered at timepoints after infection. (Doses may also be administered topically or by IV, SC, PO, IM, IP or IV infusion.) At 24 after the first treatment, animals are humanely euthanized and the skin tissue is aseptically removed. Tissue is homogenized and pathogen counts are determined by plating to agar medium. Pathogen counts from treatment groups are compared to vehicle groups and the significance of an effect is determined.

Turnaround Time(s)
5 weeks from sample receipt

Literature

Optional Services
Analysis of cytokines (with Luminex) and histopathology can be performed upon request.

Related Assay(s)  (Item # - Assay Name - Species)
606000* -  Staphylococcus aureus (Smith, ATCC 19636) MIC  - Bacteria
608010 -  Staphylococcus aureus (Smith, ATCC 19636), Peritonitis, LD90-100  - Mouse
608050 -  Staphylococcus aureus (Smith, ATCC 19636), Thigh Infection Model CFU/g  - Mouse
*provided by partner lab Eurofins Pharma Discovery Services

Modified Protocols
We will readily accommodate client-specified alterations.

Laboratory
These assays are performed at our AAALAC accredited BSL2 laboratory in Taipei, Taiwan.

Animal Welfare
All aspects of this work is performed in general accordance with the Guide for the Care and Use of laboratory animals (National Academy Press, Washington, DC, 2011). The study protocol was approved by the Pharmacology Discovery Services IACUC and is performed with the oversight of veterinarians to assure the humane treatment of laboratory animals.

Reference Compound(s)
Gentamicin, Mupirocin

For current details about our Company address and contact information, please reference our website
http://www.pharmacologydiscoveryservices.com/company-info/
Graph(s)

#608070, S. aureus, Intradermal infection Model, Mouse
Gentamicin Treatment

Log(CFU/g skin)

Last modified November 20, 2017