Model Name
Enterococcus faecalis VRE (ATCC 51575), Systemic (IV), Kidney CFU/g

Item Number
608270

Introduction
This assay assesses the antimicrobial efficacy of test articles in a systemic infection model of septicemia. The microbial counts in kidney tissue are measured. Enterococcus faecalis is a commensal bacterium that can cause life-threatening infections (particularly in the hospital setting) such as endocarditis, bacteremia, peritonitis, and urinary tract infections. This model is performed with a VanB producing E. faecalis strain that is resistant to vancomycin.

Procedure Summary
Groups of 5 immune competent mice are used. Animals are inoculated intravenously with pathogen suspension then test articles or vehicle are administered at time points after inoculation. (Doses may be administered IV, SC, PO, IM, IP or by IV infusion.) Animals are humanely euthanized with CO2 asphyxiation at time points and kidneys are aseptically removed. Kidney 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 PK exposure can be performed upon request.

Related Assay(s)  (Item # - Assay Name - Species)
602100* - Enterococcus faecalis, VanB (ATCC 51575) MIC - Bacteria
608250 - Enterococcus faecalis VRE (ATCC 51575), Peritonitis, LD90-100 - 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)
Ciprofloxacin
Graph(s)

#608270, *E. faecalis*, Systemic IV Model, Mouse
Ciprofloxacin Treatment

![Graph showing the logarithmic scale of CFUs per gram of kidney with different treatments and their respective effects.](image)

Last modified November 20, 2017

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