Model Name
Candida albicans (R303), Systemic (IV) Infection, Kidney CFU/g

Item Number
609035

Introduction
This assay assesses the antimicrobial efficacy of test articles in a disseminated infection model of candidiasis and is performed with neutropenic animals. The microbial counts in kidney tissue are measured. Candida albicans is a fungus that grows as yeast and as filamentous cells and causes opportunistic oral, genital, and systemic infections of humans. Strain R303 is a human blood isolate that is susceptible to azoles, amphotericin B and echinocandins.

Procedure Summary
Groups of 5 neutropenic mice are used. Animals are inoculated intravenously with pathogen suspension. 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
F. Robledo-Avila et al, Clin Dev Immunol 2013

Optional Services
Analysis of cytokines (with Luminex) and PK exposure can be performed upon request. Histopathology of tissue samples may also be performed.

Related Assay(s)  (Item # - Assay Name - Species)
640022* -  Candida albicans, (R303) MIC - Fungi
*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)
* Fluconazole, Amphotericin B
Graph(s)

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CFU/g Kidney

Last modified November 20, 2017