Model Name
Aspergillus fumigatus (ATCC 13073), Lung Infection Model, LD90-100

Item Number
609110

Introduction
This model assesses the efficacy of antifungal test articles in a lethal pulmonary aspergillosis, performed with neutropenic BALB/c mice. It may be used for evaluating small molecules and biologics.

Procedure Summary
Groups of 10 neutropenic mice are used. Each animal is inoculated with an intranasal administered lethal (LD90-100) dose of pathogen. Test substance and vehicle are administered at specified time points following infection. Mortality is recorded daily during the following 14 days. Prevention of mortality in 50 percent or more (>50%) of the animals indicates significant activity. The Minimum Effective Dose (MED) is defined as the dose that results in survival of 50% (or more) of the test animals.

Turnaround Time
6 weeks from sample receipt

Literature
J Yang et al., Medical Mycology. 48: 303-309, 2010

Optional Services
Quantitative PCR, cytokine measurement and PK bioanalysis may be performed upon request

Related Assay(s) (Item # - Assay Name - Species)
640110* - Aspergillus fumigatus (ATCC 13073) MIC - Fungi
609100 - Aspergillus fumigatus (ATCC 13073), Systemic (IV) Infection, 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
Amphotericin B
Graph

Aspergillus fumigatus (ATCC 13073), Lung infection, LD90-100
Amphotericin B (AMB) titration

Survival (%)

Days Post-infection

Vehicle, 1 mL/kg, QD x 1, IT
AMB, 0.01 mg/kg, QD x 1, IT
AMB, 0.03 mg/kg, QD x 1, IT
AMB, 0.1 mg/kg, QD x 1, IT

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http://www.pharmacologydiscoveryservices.com/company-info/