Model Name
Adrenergic α1 Antagonism

Item Number
501010

Introduction
Adrenoreceptors act on G protein-coupled receptors. All three known adrenergic α1 (α1A, α1B, α1D) receptors mediate contractile responses involving Gq/11 and inositol phosphate turnover. Adrenergic α1 receptor agonism is known to contract the iris dilator as well as other smooth muscles. Adrenergic α1 receptor antagonism may result in hypotension as well as orthostatic hypotension and be useful in the treatment of benign prostatic hyperplasia.

Procedure Summary
Pupil diameter is recorded before and 60 minutes after the administration of test substance p.o. to a group of 5 ICR male mice weighing 23 ± 3 g, and again within 30 seconds following injection of norepinephrine (1.0 mg/kg i.v.). If norepinephrine-induced mydriasis is inhibited by 50 percent or more (≥50), α1-adrenergic receptor antagonist activity is indicated.

Suggested Testing
• n=5/group (study design dependent).
• Adrenergic α1 antagonism assessed at an initial dose of 30 mg/kg.
• Dosing volume at 10 mL/kg.

Turnaround Time(s)
• Acute Assay: In-Life completion in 2-4 weeks from sample receipt
• For Subacute Assays: 6 weeks to 3 months

Literature

Related Assay(s) (Item # - Assay Name - Species)
203500* - Adrenergic α1, Non-Selective - Rat
302040* - Adrenergic α1A, IP1 - Human
*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 laboratory in Taipei.

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)
Aspirin, Atropine, Diazepam, *Prazosin

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

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