Model Name
Hematopoiesis, Anemia, Carboplatin-induced Mouse

Item Number
547300

Introduction
Anemia is a frequent complication of cancer occurring in up to 60% of patients. Anticancer agents often cause bone marrow toxicity resulting in progressive anemia which may influence the therapeutic effects of erythropoietic-stimulating agents. Carboplatin is most widely used for study the anemia.

Procedure Summary
Groups of 6 male C57BL/6J mice weighing 25 ± 2 g are used. Carboplatin (120 mg/kg) is administered intraperitoneally and after 24 hours, test substance and vehicle are administered subcutaneously starting on day 1 for 7 consecutive days. Erythropoietin at 1500 IU/kg (SC), in the positive control group, is administered at the same time intervals. Blood is withdrawn retro-orbitally 24 hours before administration of Carboplatin and again at 24 hours after administration of test compound (Day 8) for hematological analyses, including of erythrocytes, hemoglobin and hematocrit. Student's t test is used to determine differences between the vehicle and test substance group; a value of P<0.05 is considered significant.

Suggested Testing
• n=6/group (study design dependent)
• Doses may be administered PO, IV, IP and SC

Turnaround Time(s)
• For Acute Assays: 4 weeks from sample receipt
• For Subacute Assays: 6 weeks to 3 months

Literature

Related Assay(s)  (Item # - Assay Name - Species)
N/A

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)
Erythropoietin (EPO)

Last modified November 20, 2017