

MIA-Induced Osteoarthritis in CD Rats

Order Code: MIA14

Species: Rat-CD only

Diet Supplement: None required

Osteoarthritis (OA) is among one of the most common health problems in the United States, affecting nearly one-third of all adults. And, OA is the leading cause of debility among adults in the United States. OA is characterized by degeneration of joint cartilage, synovitis, remodeling of subchondral bone, muscle weakness, and musculoskeletal pain and stiffness. Identification of therapeutics to effectively treat the inflammation, discomfort, and or pain associated with OA could provide a significant benefit to the approximate one-third of the adults that become arthritic during their lifetime.

Surgical Procedure

The animal is anesthetized via exposure-chamber with isoflourane gas. Once anesthetized, the animal is transferred to a nose cone anesthetic delivery system and the right knee is aseptically prepared. The hair is shaved, and the skin is sanitized with alternating applications of alcohol and disinfectant scrub/solution. A TB syringe and 30g needle is then used to inject 3 mg of MIA (Mono-Iodoacetate) in 50 uL sterile 0.9% saline into the knee joint cavity. The needle is passed through the patellar tendon. The animal is then removed from anesthesia and transferred to a heated recovery cage until ambulatory, at which time animals will be transferred to a home cage.

IACUC

Charles River's Institutional Animal Care and Use Committee (IACUC) governs the entire induction process, including all breeding, husbandry, procedures and post-induction holding in CRL facilities prior to shipment. The receiving institution's Animal Care and Use Committee, investigators and animal care staff are responsible for the well-being of the animal subsequent to its arrival. Justification for use of modified animals, review of experimental protocols, authorization to order animals that are modified from Charles River and all aspects concerning the use of modified animals after they arrive at the institution are the responsibility of the receiving institution's IACUC.